OGDEN VALLEY PLANNING COMMISSION

MEETING AGENDA

June 21, 2022

Pre-Meeting 4:30/Regular Meeting 5:00

- ***Pledge of Allegiance***
- ***Roll Call:***

1. **Minutes: April 26, 2022**

Petitions, Applications, and Public Hearings:

2. **Administrative Items:**

2.1 File No: UVO111221 - Request for preliminary approval of Osprey Ranch Subdivision Phase 1, consisting of 31 lots and two open-space parcels.
Presenter: Tammy Aydelotte

Petitions, Applications, and Public Hearings:

3. **Legislative Items**

3.1 ZDA 2022-01: A public hearing to consider and take action on a request for an amendment to the Powder Mountain Development Agreement.
Applicant: Anne Winston. **Presenter: Steve Burton**

4. **Public Comment for Items not on the Agenda:**
5. **Remarks from Planning Commissioners:**
6. **Planning Director Report:.**
7. **Remarks from Legal Counsel:**

Adjourn to work session

W1: Discussion regarding new state requirements for moderate-income housing plans and implementation strategies.

W2: Discussion regarding Transferable Development Rights Overlay Zone.

The regular meeting will be held in person at the Weber County Commission Chambers, in the Weber Center, 1st Floor, 2380 Washington Blvd., Ogden, Utah.
& Via Zoom Video Conferencing at https://us02web.zoom.us/j/85287811569 Meeting ID: 852 8781 1569

A Pre-Meeting will be held at 4:30 p.m. The agenda for the pre-meeting consists of discussion of the same items listed above, on the agenda for the meeting.

In compliance with the Americans with Disabilities Act, persons needing auxiliary services for these meetings should call the Weber County Planning Commission at 801-399-8761

Meeting Procedures

Outline of Meeting Procedures:

- The Chair will call the meeting to order, read the opening meeting statement, and then introduce the item.
- The typical order is for consent items, old business, and then any new business.
- Please respect the right of other participants to see, hear, and fully participate in the proceedings. In this regard, anyone who becomes disruptive, or refuses to follow the outlined procedures, is subject to removal from the meeting.

Role of Staff:

- Staff will review the staff report, address the approval criteria, and give a recommendation on the application.
- The Staff recommendation is based on conformance to the general plan and meeting the ordinance approval criteria.

Role of the Applicant:

- The applicant will outline the nature of the request and present supporting evidence.
- The applicant will address any questions the Planning Commission may have.

Role of the Planning Commission:

- To judge applications based upon the ordinance criteria, not emotions.
- The Planning Commission's decision is based upon making findings consistent with the ordinance criteria.

Public Comment:

- The meeting will then be open for either public hearing or comment. Persons in support of and in opposition to the application or item for discussion will provide input and comments.
- The commission may impose time limits for comment to facilitate the business of the Planning Commission.

Planning Commission Action:

- The Chair will then close the agenda item from any further public comments. Staff is asked if they have further comments or recommendations.
- A Planning Commissioner makes a motion and second, then the Planning Commission deliberates the issue. The Planning Commission may ask questions for further clarification.
- The Chair then calls for a vote and announces the decision.

Commenting at Public Meetings and Public Hearings

Address the Decision Makers:

- When commenting please step to the podium and state your name and address.
- Please speak into the microphone as the proceedings are being recorded and will be transcribed to written minutes.
- All comments must be directed toward the matter at hand.
- All questions must be directed to the Planning Commission.
- The Planning Commission is grateful and appreciative when comments are pertinent, well organized, and directed specifically to the matter at hand.

Speak to the Point:

- Do your homework. Obtain the criteria upon which the Planning Commission will base their decision. Know the facts. Don't rely on hearsay and rumor.
- The application is available for review in the Planning Division office.
- Speak to the criteria outlined in the ordinances.
- Don't repeat information that has already been given. If you agree with previous comments, then state that you agree with that comment.
- Support your arguments with relevant facts and figures.
- Data should never be distorted to suit your argument; credibility and accuracy are important assets.
- State your position and your recommendations.

Handouts:

- Written statements should be accurate and either typed or neatly handwritten with enough copies (10) for the Planning Commission, Staff, and the recorder of the minutes.
- Handouts and pictures presented as part of the record will be left with the Planning Commission.

Remember Your Objective:

- Keep your emotions under control, be polite, and be respectful.
- It does not do your cause any good to anger, alienate, or antagonize the group you are standing in front of.

Minutes of the Work Session of the Ogden Valley Planning Commission for April 26, 2022. To join the meeting, please navigate to the following weblink at, https://us02web.zoom.us/j/85703169095, the time of the meeting, commencing at 5:00 p.m.

Ogden Valley Planning Commissioners Present: Trevor Shuman, Chair; Shanna Francis, Vice Chair, Jeff Burton, John (Jack) Howell, Dayson Johnson, Jared Montgomery, Justin Torman.
Absent/Excused: None
Staff Present: Charlie Ewert, Principal Planner; Scott Perkes, Planner; Courtlan Erickson, Legal Counsel; Marta Borchert, Office Specialist.

- **Pledge of Allegiance**
- **Roll Call:**
  Chair Shuman asked if anyone had any ex parte communication or conflict of interest to declare. No disclosures were made.

  Chair Shuman then rearranged the agenda; he moved to agenda item six and invited Planning Director Grover to provide his comments about John Lewis, who recently resigned from the Ogden Valley Planning Commission. Mr. Grover reported Mr. Lewis has served as a member of the Commission since 2016, serving as Vice Chair and Chair for several years. He has provided a great deal of time and effort to serving the Ogden Valley through his position on the Commission. He always allowed public input on the items being considered by the Commission and conducted meetings very effectively and professionally. He then noted that the vacancy created by Mr. Lewis's resignation was advertised and the County received two applications. The County Commission selected Dayson Johnson to serve as a member of the Commission. Before any member of the Commission can serve as a member of the Commission, they must receive specific training and that has been conducted. Planning staff has also been working closely with Mr. Johnson to bring him up to speed on items before the Commission at this time.

  Chair Shuman then read Mr. Lewis's letter of resignation for the record; he echoed Mr. Grover's gratitude to Mr. Lewis for his diligent service and thanked him for always striving for responsible planning.

  Chair Shuman then reported that item two, Commission training, will follow item three.

1. **Approval of Minutes for February 15, 2022.**

Chair Shuman announced there have been no corrections or edits suggested for the minutes and he declared them approved as presented.

3. **Petitions, Applications, and Public Hearings:**
   Administrative Items.

3.1 ZTA 2021-07: Discussion and potential action on an application to amend the Form-Based Village zoning ordinance, along with other sections of the Weber County Land Use Code, to add provisions and exhibits intended to create a Nordic Valley Village Area. *Staff Presenters: Scott Perkes & Charlie Ewert*

Planner Perkes noted Planning staff has received a great deal of public input regarding this application from 28 individuals; this input has been summarized within the supporting documentation for the item. He then summarized a staff memo regarding the application to amend the Form-Based Village Zoning Ordinance to add provisions and exhibits intended to create a Nordic Valley Village Area; the memo provided a comparison of the most recent version of the draft ordinance amendments with those that were initially presented to the Commission on March 22.

Commissioner Burton cited a proposed ordinance amendment that is specific to the Nordic Village; he asked if the ordinance can include other references to specific project areas. Mr. Perkes answered yes. Commissioner Burton asked if employee housing can be called out and regulations for specific project areas included. Mr. Perkes answered yes.

Commissioner Burton stated that bullet point 22 in the memo addresses hard-surfaced asphalt or concrete in parking areas. He stated in the past there has been discussion about using a material that would allow water to percolate through. He asked if that

has changed. Mr. Perkes answered no; the applicant has indicated a willingness to use a material that will allow water to percolate through; they will work with the County Engineer to identify a material that can be considered 'hard surface' to address concerns about muddy parking areas, but that will also allow water to percolate through. The Commission reviewed the language in the ordinance document that addresses hard surface parking areas. The indicated that traditional hard surface parking may be acceptable so long as there is an area nearby where run-off water can be stored and allowed to percolate into the ground; however, there was concern about pollutants that are collected as water runs off a hard surface parking area causing damage to the ground. Chair Shuman invited input from the property owner encouraging the amendments that would address the Nordic Valley Village Area regarding their ideas for parking surface.

Ronda Kippen, project manager for the Nordic Valley Team, stated she was shocked by the language regarding the hard surface parking throughout the project as this was not what has been discussed by the Team and Planning staff; her client's proposal is proposing to use asphalt or concrete in all commercial parking areas, but the temporary day skier parking lots would be similar to what is allowed under current code, which indicates that temporary parking lots are not required to be paved. She referenced several parking lots in the Valley that are not paved based upon this code language and stated that her client would like to be allowed to continuing operating in that manner. She added that storm detention basins do not filter run-off water; rather, they only store the water and pollutants are allowed to percolate in the ground. She stated that she would like to reduce the footprint on the environment by reducing the amount of asphalted areas; her client would use an integrated grid parking format that would include pavers with grass growing between it; it is easy to maintain and is green throughout the spring, summer, and fall months. It also allows water to percolate into the ground. She asked that the Commission consider altering the language in the proposed ordinance to allow a varied type of parking area rather than strictly hard surface.

The Commission discussed the language in the document and focused on possible edits that would provide flexibility while addressing concerns expressed by the community about parking areas that turn to mud during the warmer months of the fall, winter, and spring. Commissioners acknowledged the presence of other parking areas in the Valley that are not asphalt or concrete, but that also do not turn into mud as does the current parking area at the Nordic Valley ski resort. They also debated the definition of hard surface with a focus on whether grid pavers mentioned by Ms. Kippen could qualify as hard surface parking. Planning Director Grover stated he would be comfortable with allowing that type of parking in the Nordic Valley Village Area, but not in other areas of the Valley that could be assigned this zoning designation. Commissioner Torman suggested that the ordinance read 'concrete, asphalt, or Engineer Division approved alternate surface' as qualifying for hard surface parking. Mr. Grover stated he feels that language is adequate. Commissioner Burton stated staff has communicated that the ordinance can include regulations specific to the Nordic Valley Village area without concern that the same regulations would be applied to other areas of the Valley.

Mr. Perkes then addressed the street regulating plan in the draft ordinance document; he oriented the Commission to renderings included in the ordinance document to familiarize them with the adjustments that have been made since the Commission's last review of the document.

Commissioner Johnson then cited references to a requirement to use a licensed architect for design of buildings in village areas but noted that State law requires an architect or structural engineer for residential projects. He suggested that the language be amended to indicate that a licensed architect not be required for residential lots in a village project. He stated this will ensure the County is conforming with State law. Chair Shuman asked Legal Counsel Erickson to look into the State law referenced by Commissioner Johnson and provide input regarding the proposed adjustment or whether the Commission can strike the language entirely and direct developers to rely upon State law governing such issues.

Discussion then shifted to the order of actions taken by the Council for projects such as the Nordic Valley Village area, after which Chair Shuman invited additional input from the Nordic Valley Team. There were no comments provided at this time.

Mr. Erickson then addressed the discussion regarding using a licensed architect for design of buildings in village areas; the State Code provides an exemption from licensure for an architect working on one- or two-family dwellings, including townhomes. There are also provisions under which an engineer can perform similar service without being licensed. As a general matter, the County has the authority to regulate matters above and beyond what is required by the State; however, he has not had enough time to review the State Law and his input should not be considered to be a definitive legal recommendation. He can research the matter further if the Commission does want a formal recommendation before taking action on the proposed ordinance. The Commission debated the matter and ultimately concluded to continue discussion of the matter following the receipt of public input.

Chair Shuman then invited public input, asking each commenter to limit their comments to two minutes.

Kimmy Wright stated he lives adjacent to the Nordic Valley ski resort; when he moved to area 45 years ago, he dreamed of a Nordic Valley Village. He is supportive of the Village concept and for the ski resort to be developed and improved. He believes the developer will address the water and sewer concerns, but he does not believe the ski resort itself is quite big enough to compliment the actual Village development.

Bruce McGill stated he has lived in the area since 1994. He noted the intent of a form-based code for the Village concept is to provide for an aesthetic transition from tall buildings in the village to nearby single-family homes. He noticed the developer has made a concession relating to the view shed for the area near Viking Drive by reducing the size/height of one of the multi-family buildings, but he does not feel that is enough. He recommended that the taller buildings be located near the base of the ski hill to protect the view of those that already live in the area, which would help to address concerns that have been expressed previously. He then addressed the southernmost roundabout near Viking Drive and Nordic Valley Way and recommended that it be moved further to the north to help to adequately disburse traffic away from existing single-family homes where many young children live.

Peggy Dillingbaker stated she is a 37-year resident of the Nordic Valley area and has been witness to two past attempts to rezone and redevelop the area. When she first heard about the small village concept, she was supportive; however, she does not think that the project that has been proposed meets the definition of 'small'. This project will contain 507 units, and that is not small for this area. She then noted that the presumption of the rezoning is concerning; if the County votes for the form-based village zone and assign it to 50 acres of space – one of the last remaining open spaces in the Ogden Valley – it will seem as if the action on the proposed development of the area will have been predetermined. She asked that the Commission hold off on making a vote tonight and take additional time to consider the plans that have been presented. She would prefer a plan that fits into the current zoning of the area.

Ron Gleeson stated he submitted information to staff prior to the meeting to express his concerns about this item. Specific to the form-based village concept, there is a concentration of buildings and multi-family units; he would like for the land use code to address lighting that is associated with a concentration of buildings. This would include the maximum number of lumens for any home or any light in a project area. This would help to preserve dark skies in the Valley. He referenced ordinances in other communities that are aimed at preserving dark skies.

Darren Robowski stated he has lived in Nordic Valley for seven years; he has been paying attention to this project for the last several months and has heard the many comments regarding the availability of water in the Valley. He referenced the comments made by the applicant regarding drilling into aquifers and noted the information included in those communications are not supported by a 1994 USGS, nor a 2019 UGS study regarding the aquifer under the Pineview Reservoir. He does not think the County is prepared to formulate requirements that address the depth of the aquifer when the information that has been presented by the applicant are not fact based.

Doug Weaver presented density calculations that could be allowed in a village project, emphasizing that the maximum density that could be allowed would be 14 times the current Nordic Valley density. He noted he lives on Viking Drive, and he identified areas surrounding him that are subject to future rezone that would allow a dramatic increase in density. He noted the existing development in the area conforms with the rural residential or estate lot definitions in the land use code; but they do not meet the definition of small, medium, or large residential areas at .07 to .5 acres in size. He stated that he feels the project threatens to erode the special rural character of the neighborhood; it is not needed in order for the village to be built at the base of the ski area and he is unsure the applicant even wants the zoning that is being contemplated. His understanding is that this proposal will impact the future zoning opportunities of the area and he wondered if it is a justification for the larger buildings that are being considered in the area. The text amendment should be considered concurrently with a rezone application as mentioned by Commissioner Francis and making a decision tonight would be very premature. He stated that he has performed an exercise to determine the potential impact that the text amendment could have on the entire Valley; he believes that there could be three village projects in a 1.2-mile radius. This is contrary to the communicated goal of the village concept, which is to consolidate development in one area. He stated public comments have been overwhelmingly in favor of increasing setbacks and reducing building heights, but he believes that minimum lot sizes are actually being removed from the text and this will impact people who live near the golf course. This will impact a homeowner's maintenance of their building and they will need to secure access to their own property through neighboring properties.

Jan Fulmer spoke to the regulations for short term rental properties; she stated she is unsure the County will be able to enforce the regulations requiring owner occupancy or use of a management company. She also addressed bonus density language in the Ogden Valley General Plan and indicated the word 'sparingly' is very subjective. Bonus development units were never supported by the public that participated in creation of the Plan; rather, they were added 'behind closed doors' by the County Commission.

Beth Austin stated she lives on Nordic Valley Drive and her greatest concern is the wide variety of permitted uses that would be allowed on the streets of Nordic Valley if the text amendment is approved. She stated that her zoning is FV-3, rather than a resort type of use, but her neighbors could apply for resort or village zoning that would allow so many different types of uses that would impact her and others' way of life. She added she does not understand how, if Nordic Valley Water rejected the form-based village zone, individual lot owners are to expect to have access to water. She is also concerned about uses that would be allowed in open spaces; these uses do not comply with the Ogden Valley General Plan, and they will impact the health, safety, and welfare of residents in the area.

Eric Van Arks stated he also lives in Nordic Valley Drive, and he read a letter that he wrote opposing the form-based village zoning; the letter communicated his concerns about the negative impact that a village project will have on the beauty of the area. There is no land more deserving of protection that the open space in this area and the overlay zoning would lead to the destruction of the open space; it will also be a catalyst for future projects and all open space will be in jeopardy. Once the open space land is developed, it is lost forever. He suggested removing form-based zoning from the list of options in Ogden Valley. Many people only see the open space from the road, but he encouraged everyone to visit it personally to gain a personal understanding of the environment that is home to many animals; it is beautiful and natural with unequaled peacefulness. The land is currently zoned O-1 and he asked that zoning designation be preserved.

Felice Quigley stated she is new to the Nordic Valley area after purchasing a home there a year ago. She has actively monitored this proposal and she is not opposed to development; she understands residents cannot restrict a property owner's right to develop and built upon their land as that is every property owner's option and right. However, the residents of an existing neighborhood should be able to comment on what is important to them. There are 300 residents of an existing community, and they are concerned with how their properties will be impacted; one of the things that should be considered is that this may not be the most appropriate zoning for the subject property. When the developer first made application for zoning, he requested DRR-2 zoning because DRR-1 was limited to 100 acres. She suggested that the County and the applicant revert to that idea rather than trying to force form-based village zoning into an area that has been established for many years.

Larry Irvin stated he has prepared an analysis of the form-based village concept and the reasons that it is inappropriate for the subject property; he feels many of the proposed text amendments are an attempt to shoehorn the Nordic Valley area into a form-based village concept because it does not fit naturally. Nordic Valley stands out notably from the other potential village locations on the General Plan Map, primarily because it is the only location that relies heavily on currently zoned open space for a significant portion of the building development. Total development size is over 500 acres, but the majority of the building will occur in the 54 acres across the road from the current Nordic ski facility, of which 40 acres is currently zoned open space. It is hard to imagine a high-density proposal getting as far as it has based on the concept of converting this much open space, but that would happen if the form-based village is assigned to the property. Open space will be physically consumed by high density development and will dramatically alter the area in a manner much different than the other proposed village locations.

Robbie Kunz stated one thing that residents are concerned about how the form based village zone will impact their properties; he understands that he and his neighbors have the opportunity to become part of the village zone for their own properties, but it does not seem like a viable option for them primarily because most of the homes in the area are on one acre and there are difficulties with water and septic infrastructure on lots of that size. Lot sizes will be reduced to half or quarter acre in size and that is something that the existing residents cannot support; the form-based village will not work as designed on those lots because there is not sufficient space to provide for proper transition between larger lots and smaller lots.

There were no additional persons appearing to be heard.

Commission discussion centered on the timing of potential zone changes, with Mr. Ewert noting that is not to be determined tonight; the matter before the Commission this evening is whether to adopt the text that creates the Nordic Village Area. The zone would not be applied to any property tonight, but an application for the zoning will be presented to the Commission at a future meeting. If a neighboring property owner would like to pursue a similar zone change, they would need to submit their own application. Each application would be considered on its own merits and the Planning Commission would be the body

recommending an action to the County Commission. He then presented a map to orient the Commission to the areas that have been designated as being appropriate for small area plans in the General Plan. He also identified the areas that have been identified as being suitable for village projects; however, the boundaries of the villages have not been specified.

Commissioner Burton asked if there is any reason the form-based zone could be applied only to the Nordic Valley resort area. Mr. Ewert answered no. Commissioner Burton clarified that any adjoining property owner could also pursue the zoning and make their property part of a village project.

Chair Shuman stated that he lives in a zone that requires three-acre residential parcels and he likened the concept of someone applying for the form-based village zoning to him seeking commercial zoning on his property; the hurdles that the applicant will need to get over are fairly significant and assigning the zoning is not a given for any applicant. Mr. Ewert stated that is correct. Commissioner Francis noted the difference is that the Nordic Valley resort project will be built on open space and that is the matter that is concerning residents. Mr. Ewert stated that is correct and he sympathizes with existing residents.

Mr. Ewert then provided a high-level explanation of the process the applicant will follow to pursue a zone change and seek a transfer of development rights (TDR) to their property; this led to philosophical discussion among the Commission regarding their concerns and the concerns of the residents about the form-based village zone and TDR actions. Mr. Ewert responded to several comments and questions from residents, namely focusing on the areas designated for village projects; overall density of village projects and the Valley as a whole; infrastructure improvements; lighting restrictions in an effort to preserve dark skies; adequacy of water and health of the Pineview aquifer; the relationship between and timing of the form based village zone ordinance and the imminent application for the zone for the Nordic Valley project; the role of planning staff in assisting a developer through various development processes; permitted uses in the zone; and previous plans for the open space near the ski resort and developed residential neighborhood. Discussion then shifted to the present development options available to the developer under the current zoning; Mr. Ewert offered a comparison of the present development options with the option that the developer pursued and for which they are seeking to change the zoning of the property. He stated it is his opinion that the development that the developer is pursuing under the form-based village zone is much better, at least from an environmental perspective, than current development options. Additionally, the Planning Commission will have a great deal more input on the development plans under the form-based village zone than under the present zoning. If the developer were to prove they are able to meet all requirements of the current zoning, the County could not legally deny them from proceeding. He added that he feels the applicant is sympathetic to the concerns that have been expressed by residents and have made several modifications to their original plan; he believes they will continue to work with the community to improve the plan.

Commissioner Burton asked if the Nordic Valley Form Based Village Zoning will be available to other areas of the Valley or if it will only be allowed in the property around the ski resort. Mr. Ewert stated that it will only be an option for the area that has been identified in the Ogden Valley General Plan, which is the area around Nordic Valley; however, that is not just the property that is owned by the applicant, and it includes other properties.

Commissioner Howell moved to forward a positive recommendation to the County Commission for application ZTA 2021-07, application to amend the Form-Based Village zoning ordinance along with other sections of the Weber County Land Use Code, to add provisions and exhibits intended to create a Nordic Valley Village Area, based on the findings and subject to the conditions listed in the staff report. Commissioner Torman seconded the motion.

Commissioner Burton offered a friendly amendment; page 59 of the ordinance discusses improved hard surface parking space and the applicant asked for an adjustment to that language. Commissioner Howell stated he will accept that amendment. Commissioner Francis added that she would like to modify the street map for the area. Chair Shuman stated the map is intended to be general in nature rather than definitive for any potential applicant to interpret as the only option. He stated he is not sure that an amendment to the street map is necessary. Commissioner Francis stated that the map will be on record and should provide all viewers with a legal expectation regarding the streets in the project area. Legal Counsel Erickson stated that the map will communicate the street classifications that would be present if someone were to change zoning to the Form Based Village Zone, but they could ask for a variation from the map to change a street classification. Chair Shuman added that would be a legislative action. Planning Director Grover agreed; the Form Based Village Zone will essentially create a small area plan as called for in the General Plan; it will define land uses for that area in ordinance form.

Mr. Ewert offered suggestions for the street classification map that he believes the applicant would be comfortable with. Mr. Erickson offered the Commission with guidance on the proper procedure/motion to make to pursue a change to the ordinance

document. He suggested the Commission discuss all potential changes to the ordinance rather than considering friendly amendments to the motion made by Commissioner Howell.

Chair Shuman then facilitated discussion among the Commission regarding the amendments to the ordinance that a majority of the Commission supports. The Commission discussed amendments to the text regarding hard surface parking improvements and licensed architect requirements, but Mr. Erickson advised that the Commission vote on the original motion as it does not include any amendments to the ordinance documents as presented.

Chair Shuman called for a vote on the original motion. Commissioner Howell voted aye. Commissioners Francis, Burton, Johnson, Montgomery, Shuman, and Torman voted nay. (Motion failed 6-1).

Commission discussion on potential text amendments continued; Commissioner Francis stated she would like to see amendments to the street layout map. Chair Shuman refocused on amendments to the hard surface parking text and licensed architect requirements. The Commission debated whether to strike the entirety of Section 104-22-6.2(a) or just the words "licensed architect" from both sub items (a) and (b). Commissioner Johnson noted that the stricken language could be replaced with language requiring compliance with Utah State Law regarding design. Mr. Ewert suggested the Commission take a poll to determine if there is support for each individual text amendment before making a motion. Chair Shuman stated polled the Commission regarding proposed changes to sub items (a) and (b) as follows:

(a) ~~Licensed architect required. In each village area, buildings shall be designed by a licensed architect~~. A building's street-facing facade shall be designed to have a base, body, and cap, each of varying design features and building material. At least one of the building materials used on the building facade shall also be used on all other sides of the building.

(b) Modification of standards. ~~After receiving recommendation from a licensed architect, t~~The planning commission may allow minor modifications to the applicability of the standards in this section as long as it results in a design that better aligns with the intent of the design theme and blends well with the design of adjacent buildings.

There were four Commissioners who supported the text amendments specified above.

Chair Shuman then discussed the street layout map and asked Commissioner Francis what specifically she would like to address. Commissioner Francis stated she would like to address the overreach of the map into existing neighborhoods. Commissioner Torman stated that he is concerned about changing the map as it is the result of years and years of work by County staff. Chair Shuman added that the map is similar to the directives in the General Plan; it is just a tool to offer some guidance to the reader of the Plan, but it does not necessarily mean that the streets included on the map will eventually come to fruition. Mr. Ewert stated that it is actually a bit different than a General Plan exhibit; if the street map is adopted and someone applies for a rezone, they will proceed with the roads as identified on the map. Chair Shuman stated that would only be the case after an applicant moves through the legislative process to secure a certain zone and subsequent street designation. Mr. Ewert stated that is correct; if someone desired a different street designation, they would need to submit an application to amend the map. Commissioner Francis stated that means a resident would need to submit such an application to change a street classification due to concerns of the impact a certain type of street will have on their property; the cost to pursue a text amendment is $1,000. This led to high level discussion and debate among the Commission and staff regarding the process of amending the street layout map and the impact that the map could have on existing and future development, after which Mr. Erickson explained the role the map plays in certain development processes. He indicated that if the Commission approves the map as part of the ordinance, it is essentially like 'zoning' for streets; if someone desires a different 'zone' for their street, they will need to submit a formal application to the Planning Commission, which would be a recommending body to the County Commission.

Chair Shuman polled the Commission to determine who is in favor of amending the street designation map.

Commissioner Burton then discussed employee housing; he likes the idea of a commercial operator being able to house their employees on the site and he pictures employee housing as apartments rather than houses. He proposed that the text in the ordinance be changed to communicate that less than five percent of the total housing in the project will be for the employees of the Nordic Valley resort and will not count towards overall density of the project. This led to Commission discussion and debate regarding the appropriate amount of employee housing in a village project and the difference between employee housing and affordable housing. Mr. Perkes indicated that the County will need to adjust general guidelines relating to affordable housing in order to comply with State legislation regarding the matter. Tonight, the Commission can take action on a cap for the total

amount of employee housing that can be included in a village project, specifically the Nordic Valley village, and the specifics of how the employee housing will be governed can be handled via a development agreement for the project.

Commissioner Burton moved to forward a positive recommendation to the County Commission for application ZTA 2021-07, application to amend the Form-Based Village zoning ordinance along with other sections of the Weber County Land Use Code, to add provisions and exhibits intended to create a Nordic Valley Village Area, based on the findings and subject to the conditions listed in the staff report, and with the following amendments:

1. Section 104-22-9(a) Parking required, line 842, shall be amended to state "all parking lots shall be hard-surface asphalt or concrete, or other improved hard surface, as approved by the Weber County Engineering and Fire Departments.
2. Section 104-22-6.2(a) & (b), as follows:
    a. ~~Licensed architect required. In each village area, buildings shall be designed by a licensed architect.~~ A building's street-facing facade shall be designed to have a base, body, and cap, each of varying design features and building material. At least one of the building materials used on the building facade shall also be used on all other sides of the building.
    b. Modification of standards. ~~After receiving recommendation from a licensed architect, t~~The planning commission may allow minor modifications to the applicability of the standards in this section as long as it results in a design that better aligns with the intent of the design theme and blends well with the design of adjacent buildings.
3. Section 104-22-11 shall be amended for Nordic Valley only to provide for a maximum of five percent bonus density for Nordic Village employee housing who earn less than 80 percent of the County median income as an incentive to house employees on-site rather than having them commute and create a demand on transportation infrastructure. The details of this provision shall be set forth in a development agreement for the project.

Commissioner Torman seconded the motion. Commissioners, Burton, Howell, Johnson, Montgomery, Shuman, and Torman all voted aye. Commissioner Francis voted nay. (Motion carried 6-1).

Chair Shuman thanked the public for their involvement in this process; their thoughtful input helped the Commission to modify the proposed ordinance in a meaningful way.

2. Training.

Chair Shuman indicated the training planned for this meeting will be provided in a future meeting due to the late hour.

3. Public comment for items not on the agenda.

Ron Gleeson reminded everyone that April 22-30 is "International Dark Sky Week"; this is a great reminder for everyone to get out and enjoy the dark skies of the Ogden Valley. He referenced the website darksky.org to give people ideas of things they can do and enjoy with their families to enjoy the night.

Doug Weaver clarified that tonight the Commission was voting on a text amendment that was included in the public notice for this meeting; but they also voted on a land use map amendment and that was not part of the public notice. He stated the Commission needs to recognize this is a very big issue and neither the residents or the applicant were asking for or promoting the idea of changing the zoning for the neighborhood and he wondered the driving force behind that action. He stated that it seems that this is being promoted by the Planning Staff, though Mr. Ewert declared that he has no pride in authorship in the document and map amendment. He stated the village node in the Ogden Valley General Plan was not perceived by the public to overtake the existing community; rather, it was intended to be a village node at the base of the ski area, and no one envisioned it growing beyond that. He noted that if the street map extends beyond the proposed base area, he would propose that the text be further amended to prohibit 'leap frogging' relative to zone changes. He is discouraged by the amount of time the Commission spent talking about issues that are already regulated by the State of Utah, but there was no time spent on very important issues that will impact the residents who reside in close proximity to the Nordic Valley resorts.

also referenced the action taken by the Commission tonight; he understands the Ogden Valley will continue to grow and he is not opposed to the village concept, but there are many matters that have not been adequately considered by the

Commission. In Nordic Valley, it would be nice to have an understanding of the realistic potential residential growth in the area. In other areas of the County, unit transference is more feasible while maintaining overall density, but in the Nordic Valley region, the vast majority of the density is being transferred from the ski resort. The 2016 General Plan addresses density and the 2019 Utah Geological Study addressing water provides information regarding drilling laterally to get and pump water to the area. The overall plan to serve the best interest of the public should consider the overall economic picture for the Valley. He thinks the area will be great, but he thinks that actions that are being taken regarding the ordinance and potential land use applications are being rushed.

4. Remarks from Planning Commissioners.

There were no additional remarks from Planning Commissioners.

5. Planning Director Report.

Mr. Grover reported on the recent actions of the County Commission.

6. Remarks from Legal Counsel.

Mr. Erickson apologized if any of the counsel he provided during the discussion of application ZTA 2021-07 was confusing to the Commission or the public.

Meeting Adjourned: The meeting adjourned at 8:55 p.m.
Respectfully Submitted,

_____

Weber County Planning Commission

Staff Report to the Ogden Valley Planning Commission

Weber County Planning Division

Synopsis

Application Information

Application Request:	Request for preliminary approval of Osprey Ranch Subdivision Phase 1, consisting of 31 lots and two open-space parcels. This proposal also includes dedication of a new County roadway.
Type of Decision:	Administrative
Agenda Date:	Tuesday, June 21, 2022
Applicant:	Osprey Ranch, LLC
File Number:	UVO111221

Property Information

Approximate Address:	1385 N Hwy 158, Eden, UT, 84310
Project Area:	283.78 acres
Zoning:	FV-3
Existing Land Use:	Vacant
Proposed Land Use:	Residential
Parcel ID:	See application for all parcel numbers
Township, Range, Section:	T6N, R1E, Sections 3 & 4 N and T7N R1E, Section 33 SE

Adjacent Land Use

North:	Vacant/Residential	**South:**	Vacant/USFS
East:	Hwy 158	**West:**	Vacant

Staff Information

Report Presenter:	Tammy Aydelotte taydelotte@webercountyutah.gov 801-399-8794
Report Reviewer:	SB

Applicable Ordinances

- Title 104, Zones, Chapter 14 Forest Valley Zone (FV-3)
- Title 106, Subdivisions, Chapters 1-8 as applicable
- Title 108, Chapter 17 Ogden Valley Pathways

Background and Summary

11/12/2021 – Subdivision application accepted.

5/24/2022 – CUP 2022-06, approval of a water tank for the proposed subdivision, was granted by the Ogden Valley Planning Commission.

This subdivision plat request consists of 31 lots, ranging in sizes from 3.12 acres to 18.57 acres. Lot widths vary from 100 feet to 1972.35 feet. This proposal consists of 283.78 acres, with two open space parcels totaling 30.20 acres, 1.27 acres of trail area, in Phase 1. Public roads, and paved trails within the dedicated right-of-way, are proposed throughout the development.

Analysis

General Plan: The proposal conforms to the Ogden Valley General Plan by maintaining the existing density provided by the current zoning and existing approvals (2016 Ogden Valley General Plan, Land Use Principle 1.1).

Zoning: The subject property is located in the Forest Valley (FV-3) zone. The purpose and intent of the FV-3 zone is identified in the LUC §104-14-1 as:

"The purpose of the Forest Valley Zone, FV-3 is to provide area for residential development in a forest setting at a low density, as well as to protect as much as possible the naturalistic environment of the development."

Lot area, frontage/width and yard regulations: The site development standards for the FV-3 zone require a minimum lot area of 3 acres of net developable area. The FV-3 zone requires a minimum lot width of 150 feet. Lots located on the outside of the curved streets, or on the ends of cul-de-sacs may be reduced by up to one-third provided the lot has the required width at a distance of 70 feet back from the front lot line. Lot 17 has the smallest width, but meets this requirement.
Culinary water and sanitary sewage disposal: Nordic Mountain Water Inc. has issued approval to service Osprey Ranch Subdivision with installation of an additional underground storage ground tank. The developer is proposing a new wastewater treatment system within this proposed subdivision, with functioning capacity for 200 single-family units. The Division of Water Quality has confirmed that the preliminary plan submitted by the developer may be feasible (**See Exhibit C**). Weber County has agreed to assume the role of body politic over the proposed wastewater system, once the Department of Water Quality has issued final approval (**See Exhibit C**). A memo of feasibility has been received from the State. Planning will require a construct permit from the State, prior to going before the Planning Commission for a recommendation of final approval.

Relation to Adjoining Street Systems/Ogden Valley Pathways: The proposed subdivision will create a new public road that will connect Highway 158 to Nordic Valley Drive. A 10 foot wide paved pathway will run adjacent to the new roadway, allowing for pedestrian access from Nordic Valley Drive to pathways that run adjacent to Pineview Reservoir. Proposed pathways shall be constructed or designated for public use on currently existing, or in proposed public rights-of-way. There is an existing cross-access easement to the east through lot 27. Although this will be in phase 2, an emergency egress is proposed to connect to 2050 North Street, through parcel 22-040-0035 (to the proposed Hidden Brook Subdivision – 9 lots).

A road stub is proposed to connect property to the south to the public roads created by this subdivision. An existing access easement is shown between lots 26 and 27

Natural hazards/wetlands: This proposed subdivision lies within a geologic hazard study area. Per LUC § 104-22 a hazard study is required. All recommendations outlined in the submitted report (Western Geologic dated 1/3/2022), shall be followed throughout development of this subdivision, and subsequent construction of each lot.

The following are identified hazards/area of concern outlined in the above referenced reports, that are rated wither a medium or high likelihood to occur:

Earthquake ground shaking – High

Landslides and slope failures – High

Problem soil and rock – High

Shallow groundwater - Medium

Mitigation recommendations are outlined in the geologic hazard report submitted to the County. The developer will be required to supply a letter from the geologist and geotechnical engineer, after the roads are built, that verifies that the roads were built to the recommendations in the reports.

Standards: Per LUC § 108-14-3(a) Applicability: "*All parcels, subdivision lots, roads and accesses, where the natural terrain has average slopes at or exceeding 25 percent shall be reviewed as part of an application request for a land use permit and building permit. Hillside review is required as part of preliminary subdivision review…*" **or** a buildable area must be shown on the final plat per the following (LUC § 101-2-3 BU Definitions: ***Buildable area.*** The term "buildable area" means a portion of a lot, parcel or tract of land which is to be utilized as the building site and which complies with the following:

(a) The average percent of slope within the buildable area as defined by this section shall be less than 25 percent;
(b) The gross land area of the buildable area shall contain at least 3,000 square feet and be configured such that it can contain one 40-foot by 40-foot square;
(c) It shall not contain any geologic or other environmental hazards, as determined by the county engineer;
(d) It shall not contain any easements or setbacks; and
(e) It shall be denoted on a subdivision plat as the only area in which building may take place on a lot or parcel.

Review Agencies: To date, the proposed subdivision has been reviewed by the Planning Division, Weber Fire District, and Weber County Engineering. The Surveyor's Office have not yet reviewed this project. The County Surveyor's Office will review the plat when a final version has been submitted. At minimum, all review agency requirements must be addressed and completed prior to this subdivision being recorded.

Tax Clearance: There are no outstanding tax payments related to these parcels. The 2022 property taxes are not considered due at this time, but will become due in full on November 30, 2022.

Staff Recommendation

Staff recommends preliminary approval of Osprey Ranch Subdivision Phase 1, consisting of 31 lots and two open space parcels. This recommendation for approval is subject to **all review agency requirements** and is based on the following conditions:

1. Approval of the proposed sewer plan, on letterhead from Department of Water Quality, shall be submitted prior to going before Planning Commission for recommendation of final approval.
2. A proposed final plat for Phase 1 shall be submitted prior to going before Planning Commission for recommendation of final approval.
3. There are lots within Phase 1 that show an average slope that exceeds 25%. As such, these shall be designated on the final plat with an "R" after the lot number. Per LUC § 106-1-8.20(b)(2): A note shall be required on every page of the final plat that states "A lot labeled with the letter "R" after the lot number is a restricted lot because it has an average percent of slope greater than 25-percent. Development thereon is subject to a hillside development review pursuant to the provisions of Title 108, Chapter 14…" or a buildable area must be shown on the final plat.
4. A Natural Hazard Notice shall be recorded with the plat, and a note on the final plat shall be required which states that the parcel is located within a natural hazard study area.

This recommendation is based on the following findings:

1. The proposed subdivision conforms to the Ogden Valley General Plan.
2. With the recommended conditions, the proposed subdivision complies with the applicable County ordinances.
3. The proposed subdivision will not be detrimental to the public health, safety, or welfare.
4. The proposed subdivision will not deteriorate the environment of the general area so as to negatively impact surrounding properties and uses.

Exhibits

A. Application & Narrative
B. Proposed Plat
C. Feasibility/Capacity Assessment Letters
D. Geologic Hazards Survey

Location Map

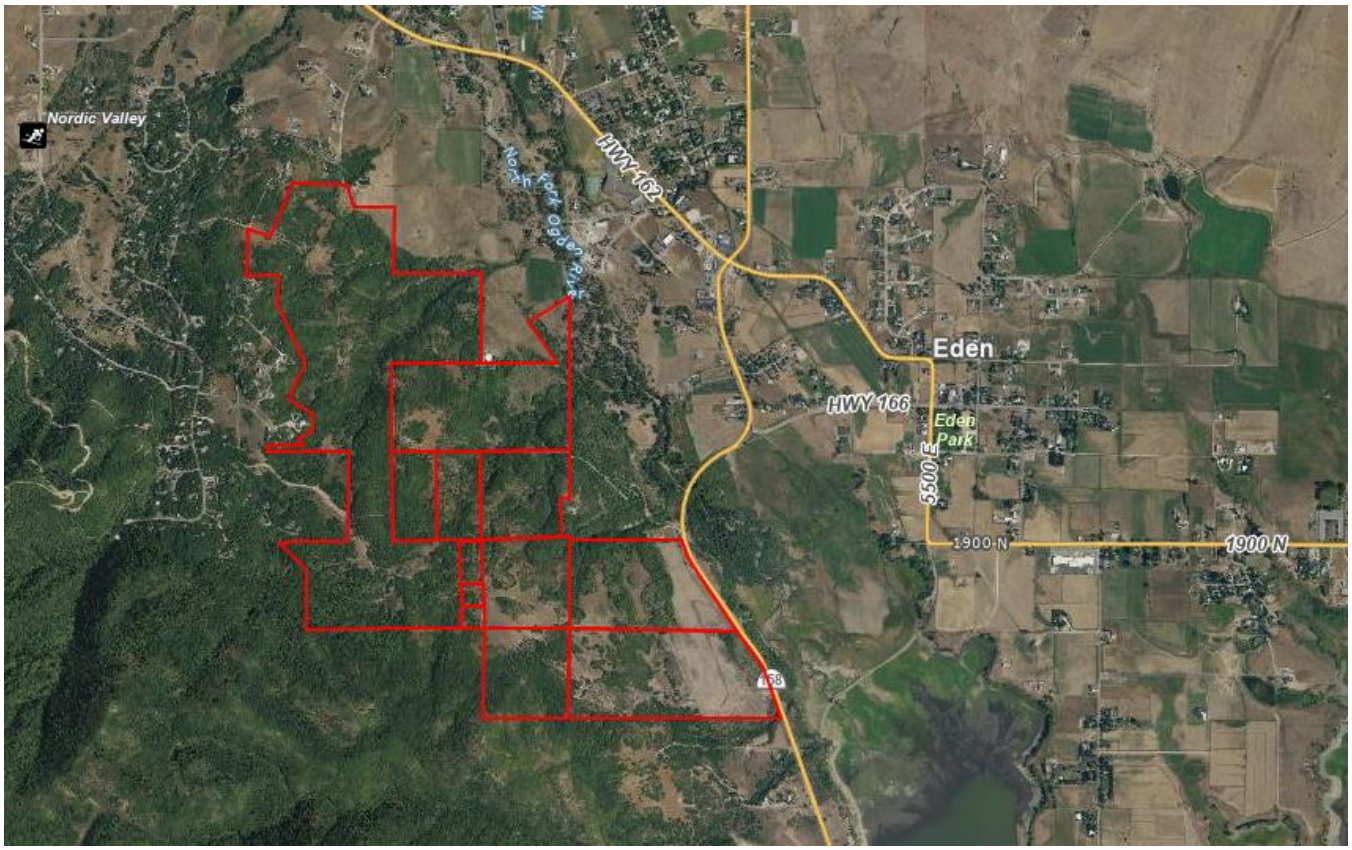


Exhibit A – Application & Narrative

Osprey Ranch Phase 1

+ Add Follower | Change Status | Edit Project

Address: 1385 N Highway 158, Eden, UT, 84310
Maps: Google Maps
Project Type: Subdivisions
Sub Type: Subdivisions
Created By: Taylor Lewis
Created On: 11/11/2021
Project Status: Accepted
Status Date: 11/12/2021
File Number: UVO11122021
Project Manager Tammy Aydelotte

Application | Documents 19 | Comments 5 | Reviews 3 | Followers 24 | Status | Notifications | Payments 1

Documents

+ Add Document | Print

List of project documents. Review documents can be found under the Review tab.

Document Name	Date Uploaded	Options
Annexation Plat		
Application		
Original 11.2021 Osprey Narrative copy.pdf	11/11/2021	Download Remove Edit
Attestation		
Cost Estimate		
Culinary Water Will-Serve		
Original Nordic Water Letter.pdf	11/11/2021	Download Remove Edit
Engineered Plans		
Revision Osprey Phase 1 - Preliminary_reduced.pdf	1/14/2022	Download Remove Edit
Revision Osprey PP Sheet_added roads_KAN-SWWP STORM WATER PROTECTION PLAN.pdf	12/21/2021	Download Remove Edit
Revision Osprey NOI.pdf	12/21/2021	Download Remove Edit
Revision Osprey SWPPP.pdf	12/21/2021	Download Remove Edit
Original Osprey PP Sheet_added roads_KAN-EX1 - OVERVIEW - FIRE MARSHAL.pdf	11/11/2021	Download Remove Edit
Final Recorded Plat		
Geologic Hazards Evaluation		
Revision Geo Haz Eval - Proposed Osprey Ranch Development - 2050 Highway 150 - Eden, UT.pdf	1/7/2022	Download Remove Edit
Original Pavement Design - Osprey Ranch.pdf	11/11/2021	Download Remove Edit
Geotechnical Evaluation		
Revision Geotech Report Osprey Ranch.pdf	1/4/2022	Download Remove Edit
Notice of Decision		
Open Space Preservation Plan		
Other		
Revision Osprey Ranch Preliminary Engineering Report.pdf	11/12/2021	Download Remove Edit
Original osprey_entry_concept.jpg.pdf	11/11/2021	Download Remove Edit
Preapplication Meeting Notes		
Proposed Final Plat		
Proposed Preliminary Plan		
Revision Osprey Ranch Preliminary Plans copy.pdf	11/12/2021	Download Remove Edit
Public Street Connectivity Plan		
Receipt		
Response to Review Agencies		
Secondary Water Will-Serve		
Septic Feasibility		
Sewer Will-Serve		
Revision Osprey Ranch Webner County Body Politic Ltr.pdf	12/27/2021	Download Remove Edit

Revision DEQ Wastewater Design Report.pdf	12/16/2021	Download Remove Edit
Staff Report		
Title Report		
Original TitleCommitment - Partner.pdf	11/11/2021	Download Remove Edit
Traffic Study/Plan		
Revision Osprey TIA Report.pdf	12/21/2021	Download Remove Edit
Revision UDOT Access Permit.pdf	12/21/2021	Download Remove Edit
Revision UDOT Approved Osprey Ranch.pdf	12/21/2021	Download Remove Edit

Osprey Ranch
Subdivision Application
June 2022

Project Narrative

Osprey Ranch is a single family homesite project located in Eden, UT. The property is in the Forest Valley Zone (FV-3), consists of 566.97 acres with 61 lots. The homesites range in size from 3.19 to 18.74 acres. The project contains 43.02 acres of common area open space with a trail system. The property will be developed in two phases with the first phase consisting of 31 lots on 283.72 acres.

Density on the property was determined by using the net developable acreage of 458.64 which translates into 152 entitlements in the FV-3 zone. Osprey Ranch will use 61 units for the project and the remaining balance of the entitlements will be allocated for future Transfer of Density Rights (TDR).

Project Density Calculation
Total Property - 566.97 acres
Roadway - 30.06 acres
Slopes Over 40% - 62.12
Sensitive Lands Stream Corridor - 16.15 acres
Net Developable Acreage - 458.64 acres
Forest Valley Zone (FV-3) requires three acre minimum
Entitlements - 458.64 / 3 = 152.88 or 152 units

A community trail system will be an amenity to the project. For public benefit, an asphalt pathway will be constructed through the project connecting Hwy 158 to the Nordic Valley neighborhood. Soft trails will provide access to the Forest Service property located south of Osprey and will be privately owned with public access allowed. The site plan includes nearly four miles of both hard and soft trails.

Gardner Engineering prepared the civil design. The geotechnical study was done by Christensen Geotechnical, while Western Geologic evaluated potential geologic hazards.

The project contains over four miles of public roadways and will have no grades above 12%. The Fire Marshal from the Weber Fire District has reviewed the road design layout.

Osprey Ranch will be governed by a Homeowners Association (HOA), Covenants, Conditions and Restrictions (CC&Rs) and Building Design Guidelines. Nightly rentals are not permitted.

Nordic Mountain Water will provide water to the project. A new Membrane Bioreactor (MBR) facility will treat the wastewater. Weber County will act as the body politic over the sewer district. A Preliminary Engineering Report prepared by Aqua Engineering for the MBR has received conceptual approval from the Utah Department of Environmental Quality (DEQ).

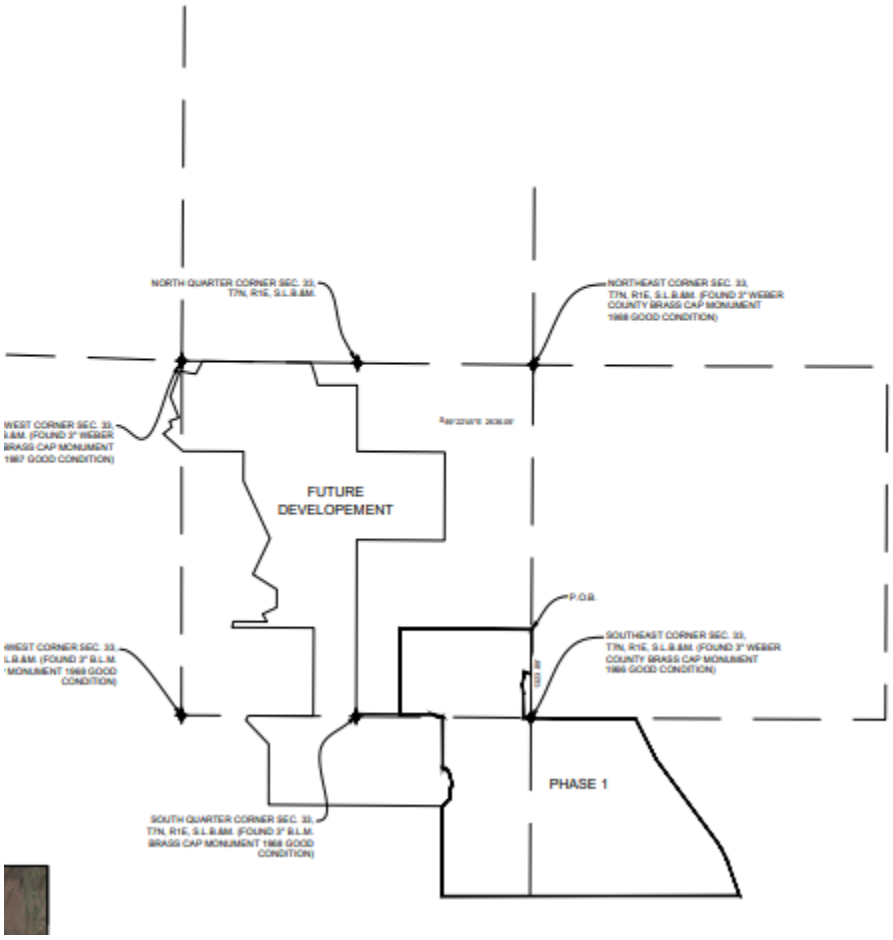
Osprey Ranch will have a subdivision entry monument. Any lighting will be dark sky compliant and the Ogden Valley Sign Land Use code requirements will be followed. A temporary project management trailer will be on site for the duration of the construction.

Exhibit B – Proposed Plat

OSPREY RANCH SUBDIVISION PHASE 1

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 33 TOWNSHIP 7 NORTH RANGE 1 EAST AND THE NORTH HALF OF SECTIONS 3, AND 4 OF TOWNSHIP 6 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, MAY 2022

CALCULATIONS



OSPREY RANCH SUBDIVISION PHASE 1

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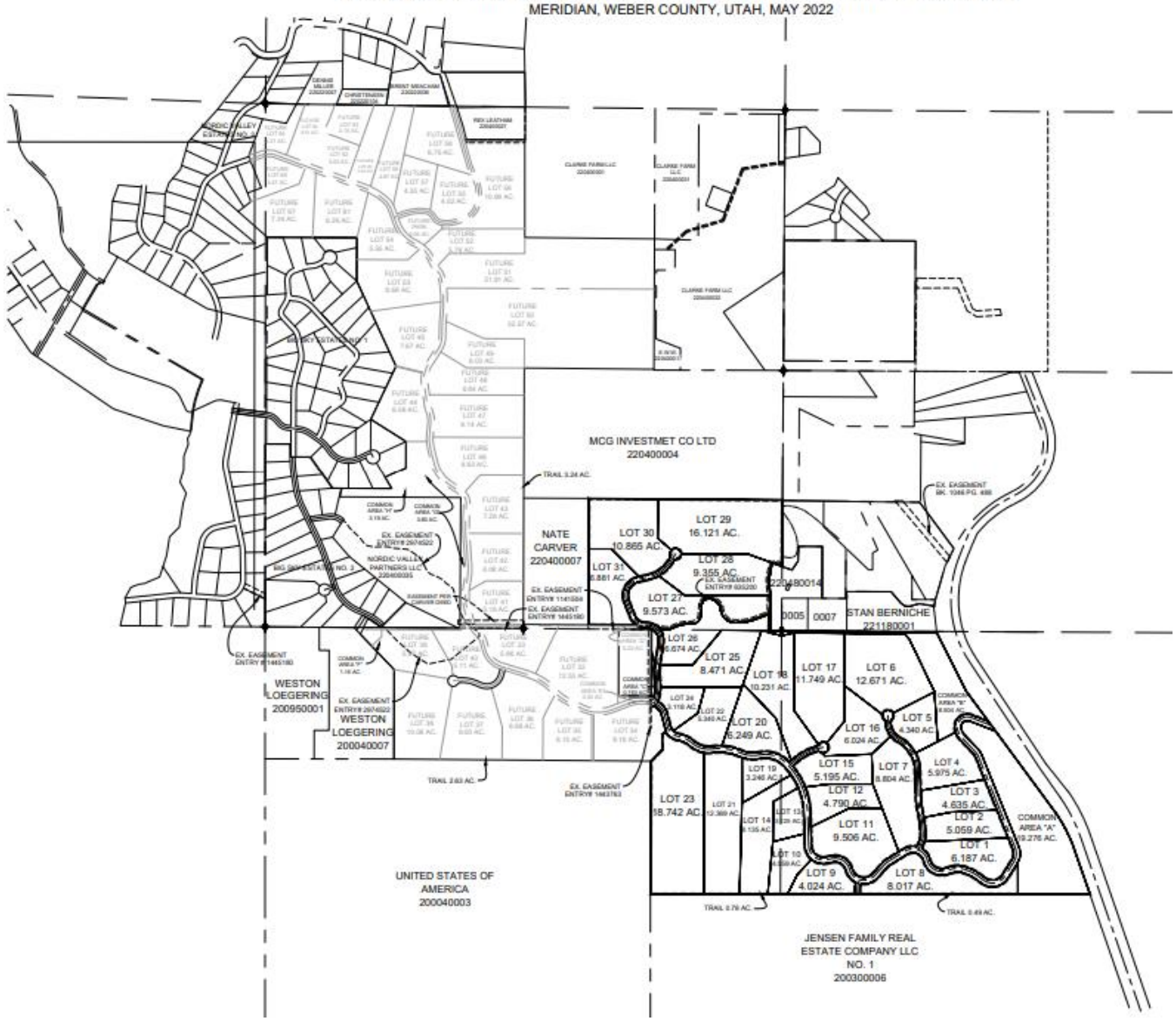
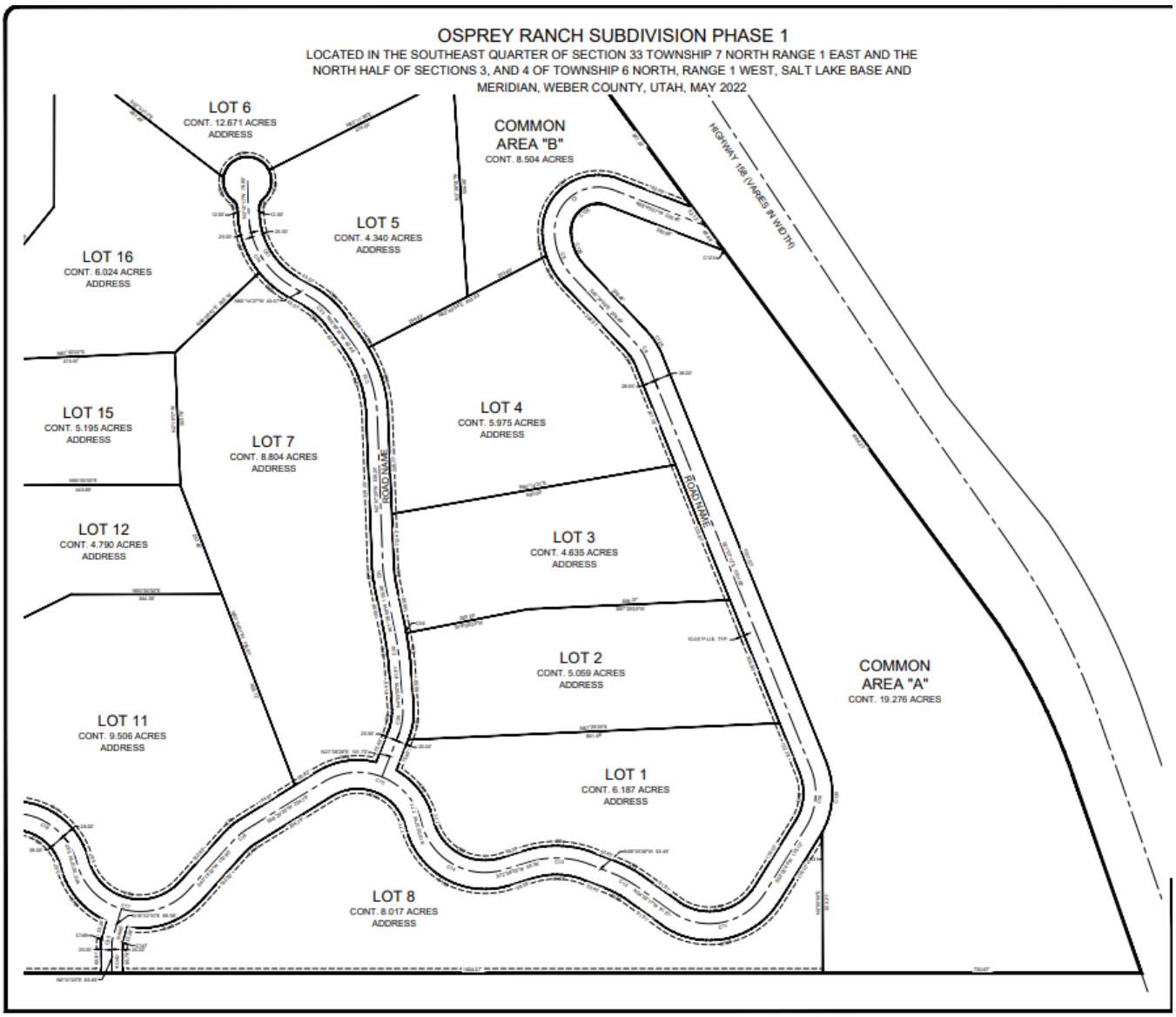
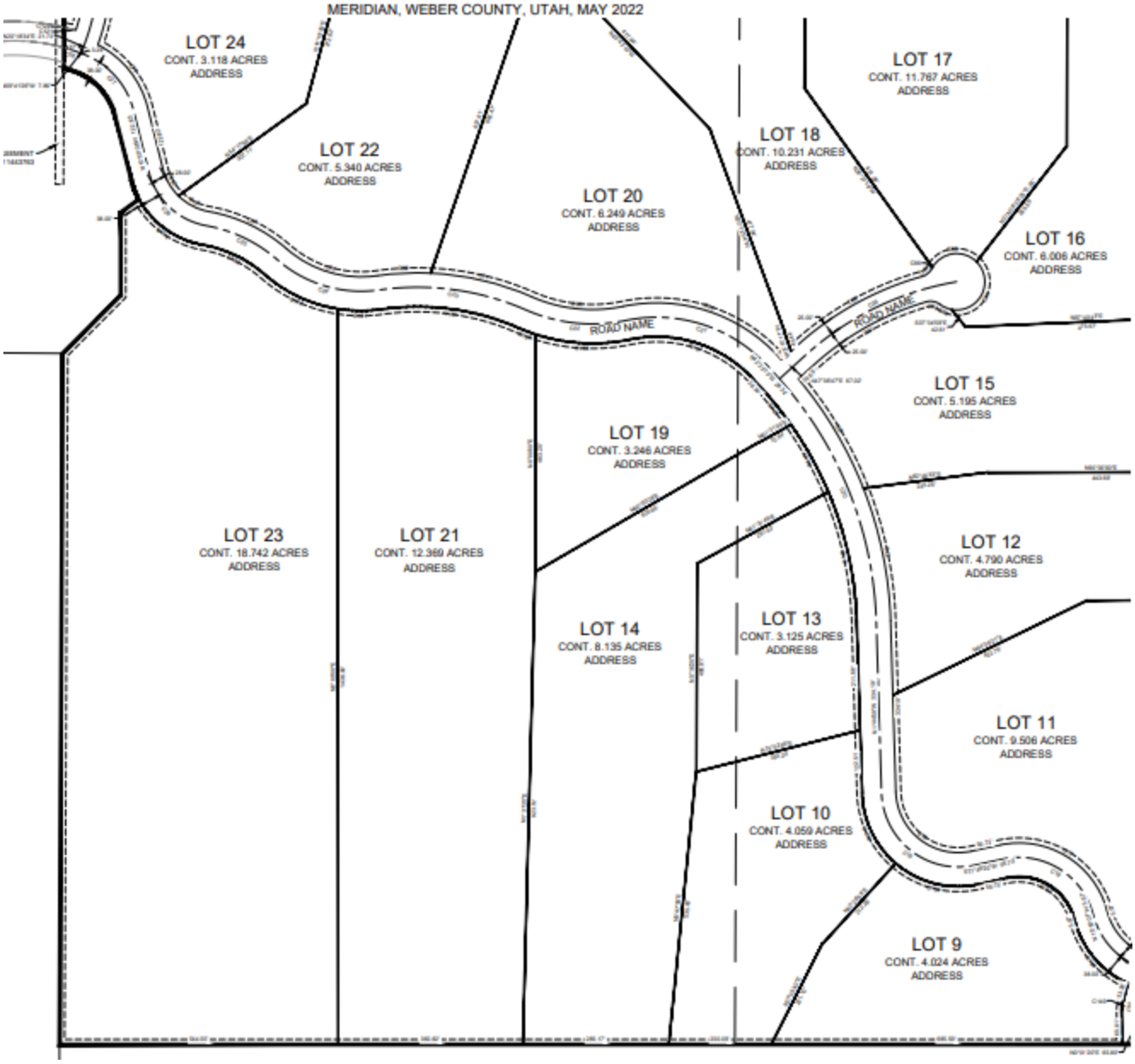



OSPREY RANCH SUBDIVISION PHASE 1
LOCATED IN THE SOUTHEAST QUARTER OF SECTION 33 TOWNSHIP 7 NORTH RANGE 1 EAST AND THE NORTH HALF OF SECTIONS 3, AND 4 OF TOWNSHIP 6 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, MAY 2022
LOT 6
CONT. 12.671 ACRES
ADDRESS
COMMON AREA "B"
CONT. 8.504 ACRES
HIGHWAY 158 (VARIES IN WIDTH)
LOT 5
CONT. 4.340 ACRES
ADDRESS
LOT 16
CONT. 6.024 ACRES
ADDRESS
LOT 15
CONT. 5.195 ACRES
ADDRESS
LOT 7
CONT. 8.804 ACRES
ADDRESS
ROAD NAME
LOT 4
CONT. 5.975 ACRES
ADDRESS
ROAD NAME
LOT 12
CONT. 4.790 ACRES
ADDRESS
LOT 3
CONT. 4.635 ACRES
ADDRESS
LOT 2
CONT. 5.059 ACRES
ADDRESS
COMMON AREA "A"
CONT. 19.276 ACRES
LOT 11
CONT. 9.506 ACRES
ADDRESS
LOT 1
CONT. 6.187 ACRES
ADDRESS
LOT 8
CONT. 8.017 ACRES
ADDRESS

OSPREY RANCH SUBDIVISION PHASE 1

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 33 TOWNSHIP 7 NORTH RANGE 1 EAST AND THE NORTH HALF OF SECTIONS 3, AND 4 OF TOWNSHIP 6 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, WEBER COUNTY, UTAH, MAY 2022



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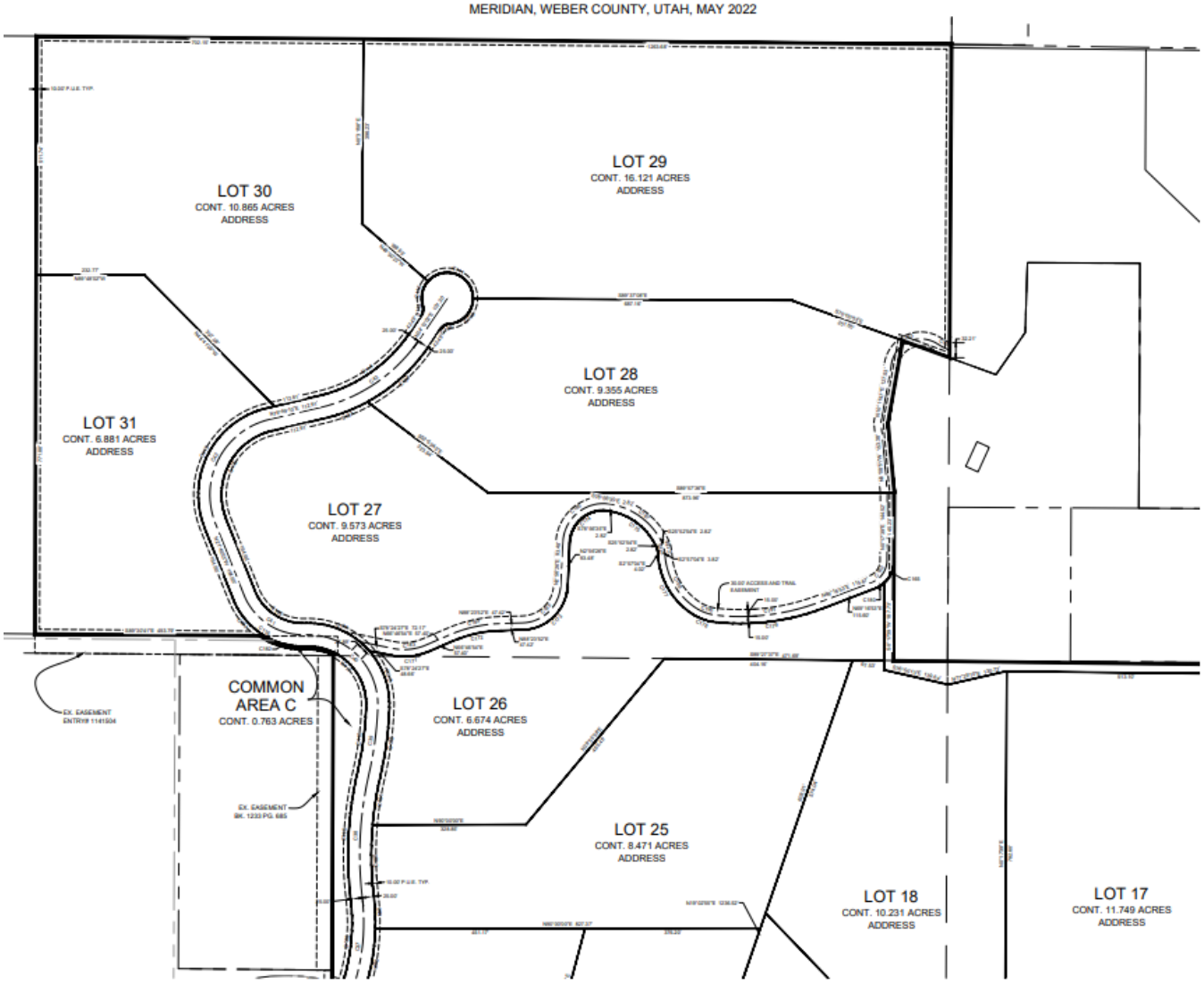

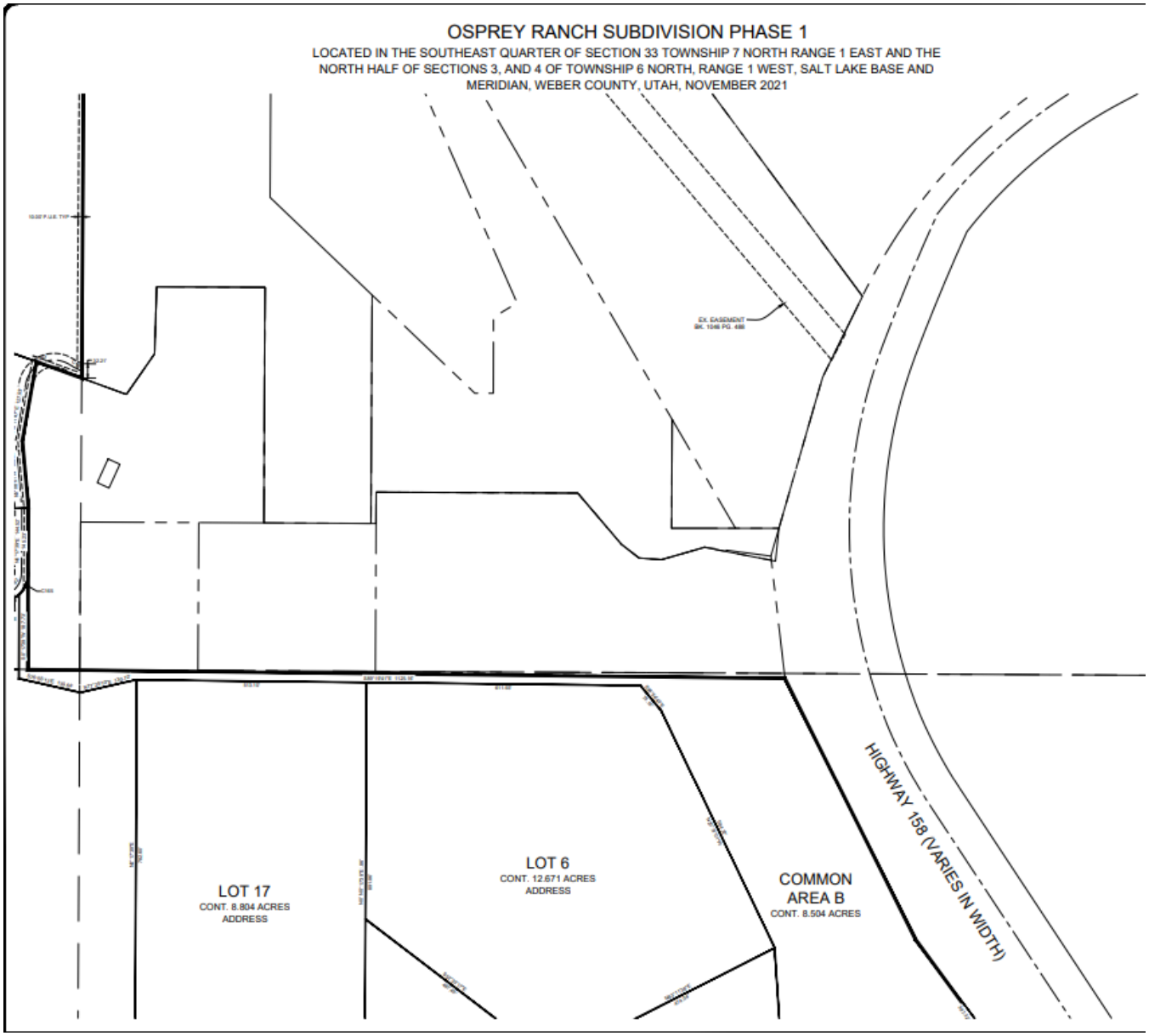
OSPREY RANCH SUBDIVISION PHASE 1
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LOT 17
CONT. 8.804 ACRES
ADDRESS
LOT 6
CONT. 12.671 ACRES
ADDRESS
COMMON AREA B
CONT. 8.504 ACRES
HIGHWAY 158 (VARIES IN WIDTH)

Exhibit C – Capacity Assessment/Feasibility Letters

Nordic Mountain Water Inc.

Mr. Shane Dunleavy
Osprey Ranch LLC
65 10-acre Single Family Home Sites
Liberty, Utah

Ref: Reservation of Service Agreement May 10, 2021

Nordic Mountain Water Inc. (NMWI) agrees to provide culinary water service to the Osprey Ranch Subdivision, a subdivision containing 65 Single Family Home Sites hereafter referred to as lots, under the following Terms and Conditions:

1. A 10% non-refundable deposit is required on the total number of metered connections rounded to the next whole lot multiplied by the Infrastructure Fee currently in effect.
    a. Reservation of Service remains valid for one year from date this service agreement is signed by legal representatives of both parties and the full deposit has been made as outlined in this document.
    b. Outstanding balance is due within one year from date this document is signed or when project is completed – whichever date is earliest.
        i. Each lot will be assessed our normal monthly fee at time subdivision is completed.
        ii. Each lot will be assessed a one-time membership fee as required at time subdivision is completed.
2. Options after one year if subdivision is not completed:
    a. Pay Outstanding balance – each lot will be assessed our normal monthly fee and one-time membership fee.
    b. Service Agreement is nullified, deposit is forfeited.
    c. Renew this Reservation of Service Agreement for an additional year at the discretion of NMWI as outlined in paragraph 1 above and at fee rates in effect at time of renewal.
3. Details
    a. Our current fee rates are:
        i. Infrastructure fee: $7,500/lot.
        ii. One-time membership fee: $300/lot.
        iii. Monthly fee for water: $75/lot for 20,000 gal. Cost increases per 1000 gals above the monthly allotment of 20,000 gal.
    b. 65 lots at one (1) residential ¾" Connection per lot.
    c. Total Infrastructure fee is 65 lots X $7,500/lot = $487,500.
    d. Non-refundable deposit due at signing of this document is $52,500 based on 65 lots X 10% rounded to whole lot multiplied by infrastructure fee/lot.
    e. Deposit(s) are credited towards the original balance identified in 3c.
    f. Final payment of original balance (3c) less deposit(s) is due not later than one year from date this agreement is signed or upon completion of subdivision – whichever date is earliest.
    g. Monthly water fee charge per lot at completion:
        i. Each lot will be assessed a monthly fee and water allocation in effect at date of completion (3a.iii).
        ii. Each lot will be assessed a one-time membership fee, at the current rate in affect at date of completion as required by NMWI for water service (3a.ii)

4. General Restrictions:
    a. No Home Owner's Association (HOA) organized by Osprey Ranch Subdivision or its residents can include any culinary water provided by NMWI.
    b. No extensions to the water system developed for the Osprey Ranch Subdivision that includes water provided by NMWI will be allowed beyond the initial 65 lots.
    c. Osprey Ranch Subdivision cannot resale, manage, restrict, or charge any additional fees for water provided by NMWI under any circumstance.
    d. All water provided by NMWI shall be used for culinary purposes only. Minimal residential landscape watering will be allowed up to 5000 sq. feet until such time as secondary water may become available.

5. Costs to the Developer
    a. Developer pays all costs including required modifications to existing NMWI infrastructure necessary to provide NMWI water to the Osprey Ranch Subdivision as identified by NMWI or its approved agent.
    b. Necessary modifications to existing NMWI infrastructure as well as all water line extension design and associated construction is subject to the following:
        i. Must meet all State, County, and County Fire District Specifications and Requirements
        ii. Must meet Water System Specifications as provided by NMWI and agreed upon, by signed agreement, at a pre-construction meeting.
        iii. All Waterline construction must be inspected and approved by NMWI or its identified Agent during all water system construction and/or modifications at the expense of the developer. Frequency of inspection will be determined during the pre-construction meeting and/or as specified in NMWI Standards and Specifications document.
        iv. NMWI will take possession of new and modified portion of the water system at time of completion and Developer will warranty the full installation and modifications for a period of at least 1 year from completion date at discretion of NMWI.

6. NMWI uses a gravity-flow distributions system. Since an engineering study has not been completed for the proposed subdivision, NMWI will not guarantee adequate water pressure.

7. This agreement is subject to change contingent upon legal review by an NMWI legal representative.

If these conditions are acceptable, please submit the appropriate deposit and sign this agreement. If you have any questions, please feel free to contact Bill Green at (801)791-3976 anytime or through our NMWI office. This unsigned document remains valid for 7 days from original document date.

Sincerely,

Bill D. Green
President
Board of Directors
Nordic Mountain Water, Inc.

Agreement of Terms: _____ Date: 5/10/21
Shane Dunleavy, Osprey Ranch Eden LLC, Subdivision Developer

Signature Date: _____ Date: 5/10/2021
NMWI Representative

From: John Mackey <jkmackey@utah.gov>
Sent: Friday, May 27, 2022 8:45 AM
To: Shane Dunleavy <shane@legacy-mountain.com>
Cc: John Lewis <john@wolfcreekresort.com>; Wilkinson, Sean <swilkinson@co.weber.ut.us>; Kim Shelley <kshelley@utah.gov>; Ken Hoffman <kenhoffman@utah.gov>; Daniel Hall <dhall@utah.gov>
Subject: [EXTERNAL] Re: Osprey Ranch Preliminary Wastewater Concept

Dear Shane,

Thank you for meeting last Friday (5/20) along with other stakeholders in the Weber County offices to review and discuss the development challenges relating to sewer / septic services in Upper Ogden Valley. Currently, the Upper Ogden Valley is classified as Category 1 and the water quality protections in place do not allow discharges of any kind, including treated effluent, to surface water (UAC R317-2-3). The most recent DWQ assessment (TMDL) shows several impairments for the watershed including Phosphorous. Additionally, based on the available information, Pineview reservoir is in close hydraulic connection with groundwater which makes subdivision development and subsurface discharges difficult to implement. The existing restrictions in combination with the natural conditions, have had the effect of limiting wastewater disposal in the valley to (mostly) the use of septic tanks. Further complicating the situation for subdivision scale development are scientifically derived recommendations from the Utah Geological Survey (UGS) septic tank density study for the area (Jordan et al., UGS, 2018). The UGS recommendations indicate that all future septic-tank based development should be limited to the functional equivalent of one single family dwelling per six acres to be protective of groundwater quality which is classified as Class 1A (UAC R317-6-3) and is protected as a source of drinking water (UAC R317-6-4).

Your company, Legacy Mountain Estates, is proposing the Osprey Ranch project with the functional equivalent of 200 single family housing units within the Upper Ogden Valley. To overcome the wastewater disposal challenges outlined above, Osprey Ranch proposes to manage and dispose municipal sewage with:

1. Community-wide sewerage system;
2. Advanced wastewater treatment capacity sufficient to satisfy Type 1 reuse water (UAC R317-3-11) plus nutrient control effluent limitations established under a project-specific or regional comprehensive nutrient management plan;
3. Treated effluent storage facilities sufficient for complete containment of treated effluent during non-irrigation, emergency, maintenance and repair periods and incorporating an impermeable membrane liner system to prevent seepage discharges to groundwater; and

4. Treated effluent disposal capacity by Type 1 land application (irrigation) established under the comprehensive nutrient management plan compatible with Class 1A groundwater protection levels (UAC R317-6-4).

We concur that wastewater management under this strategy can satisfy the water quality protection requirements needed for the Upper Ogden Valley and as such is approvable. That said, although technologically feasible in our opinion, definitive wastewater treatment and disposal (reuse) requirements have not been established or approved and therefore, a design basis for the proposed should not be assumed or advanced without our agreement.

As you know, the wastewater utility established for your project must be sponsored by a subdivision of the state and we understand that the Weber County has agreed to do so, either directly or by separate incorporation. The purpose of this requirement is to promote regional solutions that minimize the proliferation of "package plants" (R317-3-7.5) and maximize the economies and efficiencies of scale to the benefit of both the customers served and water quality. The right mix of distributed versus centralized wastewater systems should be an important consideration in the regional planning for the valley.

As you work to advance your project, we encourage you to also work with the county, sewer service providers in the area, the community, and other stakeholders to advance regional and long ranging solutions to the water quality challenges that we have in Upper Ogden Valley.

Yours truly,

John Mackey

WEBER COUNTY

April 4, 2022

RE: Body Politic for Osprey Ranch, Wastewater Treatment Facility

To Whom It May Concern:

The Weber County Commission met on December 20, 2021 and discussed whether or not they would be willing to act as the Body Politic for the proposed Osprey Ranch Subdivision wastewater collection and treatment facility. Osprey Ranch is proposing approximately 67 residential units. The Commission voted that the County would be willing to act as the Body Politic for the facility to move the project forward.

The treatment facility being proposed is a package plant using a membrane bioreactor treatment system. Disposal of the treated effluent will be done through winter storage and re-use irrigation. As long as the system receives all state Department of Water Quality (DWQ) approvals and follows DWQ requirements, then it appears that there is sufficient capability for safe wastewater disposal using the proposed method.

The following requirements, along with others imposed under applicable laws, will need to be met before final approval of the subdivision plat:

1. The owner of Osprey Ranch will need to enter into a sewer maintenance agreement with Weber County.
2. The system needs to be designed to accommodate 200 units.
3. Weber County hereby authorizes Aqua Engineering to submit Engineering Proposal to DWQ.

In addition, Weber County hereby gives notice that it intends to explore options for expanding this facility, creating a district or working with an existing district to provide sewer service in the area of the Osprey Ranch Subdivision.

Thank you,

Scott K. Jenkins, Chair

Gage Froerer, Vice Chair
Weber County Commission

James H. "Jim" Harvey

County Commission

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Exhibit D – Geologic Hazards Survey

See Attached.

GEOLOGIC HAZARDS EVALUATION
PROPOSED OSPREY RANCH DEVELOPMENT
2050 HIGHWAY 150
EDEN, WEBER COUNTY, UTAH

Prepared for

Lewis Homes
3718 North Wolf Creek Drive
Eden, Utah 84310

January 3, 2022

Prepared by

Western Geologic & Environmental LLC
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Salt Lake City, UT 84106 USA

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January 3, 2022

Lewis Homes
Eric Householder
3718 North Wolf Creek Drive
Eden, Utah 84310

Letter of Transmittal: REPORT
Geologic Hazards Evaluation
Proposed Osprey Ranch Development
2050 Highway 150
Eden, Weber County, Utah

Dear Mr. Householder:

Western Geologic & Environmental has completed a Geologic Hazards Evaluation for the Proposed Osprey Ranch Development at 2050 Highway 150 in Eden, Utah and submits the attached report for your review.

If you have any questions regarding this report, please contact us at (801) 359-7222.

Sincerely,
Western Geologic & Environmental LLC

Bill. D. Black, P.G.
Subcontract Geologist

Reviewed By:

Kevin J. Thomas, P.G.
Principal Geologist

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FIGURES

1.0 INTRODUCTION

This report presents the results of a geology and geologic hazards review and evaluation conducted by Western Geologic & Environmental LLC (Western Geologic) for the Proposed Osprey Ranch Development located at 2050 Highway 150 in Eden, Utah (Figure 1 – Project Location). The Project consists of several contiguous parcels comprising a total of about 598 acres. The Project is located in western Ogden Valley west and northwest of the north arm of Pineview Reservoir in all or parts of Sections 3, 4, 32 and 33, Township 7 North, Range 1 East (Salt Lake Base Line and Meridian; Figure 1). Elevation of the Project ranges between about 4,951 feet to 5,892 feet above sea level. Based on a Gardner Engineering site plan (preliminary plan sheet SP1 dated June 22, 2021), the Project is currently proposed for development of a water tank and a 67-lot residential subdivision with lot sizes of from 3.03 to 32.57 acres. The site plan is currently preliminary and no site grading or home locations are shown. The Project is currently undeveloped.

Western Geologic previously completed a geologic hazards evaluation for a 277-acre portion of the Project in October 2006 in conjunction with a geotechnical evaluation by Earthtec Testing and Engineering (Western Geologic, 2006). This portion of the overall Project was termed Moose Mountain Estates in 2006. Our report found high-risk geologic hazards at the proposed Moose Mountain Estates development from earthquake ground shaking, stream flooding, landslides, and radon. Data from this study was limited due to its age, but was reviewed to help prepare site-specific geologic mapping for the Project. Western Geologic also completed geologic hazards evaluations for the Beckstead Property located at about 1860 North Big Sky Drive (Western Geologic, 2018a) and the WAJ Enterprises Property located at about 2050 North Big Sky Drive (Western Geologic, 2018b) in October 2018. These properties are adjacent to the western boundary of the Project slightly north of the proposed onsite water tank location. Western Geologic (2018a) included two walk-in test pit exposures that were used to help prepare cross section R-R' (Figure 5R, Section 5.4). Test pit data from Western Geologic (2018b) was reviewed to also help prepare site-specific geologic mapping for the Project.

2.0 PURPOSE AND SCOPE

The purpose and scope of this investigation is to identify and interpret surficial geologic conditions at the site to identify potential risk from geologic hazards to the Project. This investigation is intended to: (1) provide preliminary geologic information and assessment of geologic conditions at the site; (2) identify potential geologic hazards that may be present and qualitatively assess their risk to the intended site use; and (3) provide recommendations for additional site- and hazard-specific studies or mitigation measures, as may be needed based on our findings. Such recommendations could require further multi-disciplinary evaluations, and/or may need design criteria that are beyond our professional scope. Our investigation was conducted concurrently with a geotechnical engineering study performed at the Project by Christensen Geotechnical.

2.1 Methodology

The following services were performed in accordance with the above-stated purpose and scope:

- A site reconnaissance conducted by an experienced certified engineering geologist to assess the site setting and look for adverse geologic conditions;
- Review of readily-available geologic maps, reports, and air photos;
- Logging of 67 onsite walk-in test pits to assess subsurface conditions;
- Preparation of 18 geologic cross sections based on site-specific subsurface data and inferred conditions; and
- Evaluation of available data and preparation of this report, which presents the results of our study.

The engineering geology section of this report has been prepared in accordance with Bowman and Lund (2016) and current generally accepted professional engineering geologic principles and practice in Utah, and meets specifications provided in Chapter 27 of the Weber County Land Use Code within the above stated scope. We do not include discussion of radon hazard potential, as recommended in Bowman and Lund (2016), because radon gas poses an environmental health hazard and indoor levels are heavily influenced by several post-construction, non-geologic factors. The hazard from radon should be evaluated by long-term testing following construction.

2.2 Limitations and Exceptions

This investigation was performed at the request of Lewis Homes (the Client) using the methods and procedures consistent with good commercial and customary practice designed to conform to acceptable industry standards. The analysis and recommendations submitted in this report are based upon the data obtained from site-specific observations and compilation of known geologic information. This information and the conclusions of this report should not be interpolated to adjacent properties without additional site-specific information. In the event that any changes are later made in the location of the proposed site, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or approved in writing by the engineering geologist.

This report has been prepared by the staff of Western Geologic for the Client under the professional supervision of the principal and/or senior staff whose seal(s) and signatures appear hereon. Neither Western Geologic, nor any staff member assigned to this investigation has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties or which may be responsible for environmental issues identified during the course of this investigation, and has no personal bias with respect to the parties involved.

The information contained in this report has received appropriate technical review and approval. The conclusions represent professional judgment and are founded upon the findings of the investigations identified in the report and the interpretation of such data based on our experience and expertise according to the existing standard of care. No other warranty or limitation exists, either expressed or implied.

The investigation was prepared in accordance with the approved scope of work outlined in our proposal for the use and benefit of the Client; its successors, and assignees. It is based, in part, upon documents, writings, and information owned, possessed, or secured by the Client. Neither this report, nor any information contained herein shall be used or relied upon for any purpose by any other person or entity without the express written permission of the Client. This report is not for the use or benefit of, nor may it be relied upon by any other person or entity, for any purpose without the advance written consent of Western Geologic.

In expressing the opinions stated in this report, Western Geologic has exercised the degree of skill and care ordinarily exercised by a reasonable prudent environmental professional in the same community and in the same time frame given the same or similar facts and circumstances. Documentation and data provided by the Client, designated representatives of the Client or other interested third parties, or from the public domain, and referred to in the preparation of this assessment, have been used and referenced with the understanding that Western Geologic assumes no responsibility or liability for their accuracy. The independent conclusions represent our professional judgment based on information and data available to us during the course of this assignment. Factual information regarding operations, conditions, and test data provided by the Client or their representative has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations, and conditions that existed at the time of the field exploration.

3.0 HYDROLOGY

The U.S. Geological Survey (USGS) topographic map of the Huntsville Quadrangle shows the site is in western Ogden Valley between Nordic Valley and the north arm of Pineview Reservoir (Figure 1). Two perennial streams (Coal Hollow and Grover Hollow creeks, Figure 1) cross the Project, and several intermittent and ephemeral drainages also head within the Project, as identified on sheet DR1 in the June 22, 2021, Gardner Engineering preliminary plan set. There are also several small seasonal ponds at the Project and at least three reported spring areas. No springs are mapped on Figure 1 at the site. Both perennial streams were flowing at the time of our field investigation, although the ponds and intermittent drainages all appeared dry.

Ogden Valley is dominated in the valley bottom by unconsolidated lacustrine and alluvial basin-fill deposits. Slopes in the site area are mainly in weathered Tertiary-age tuffaceous bedrock overlain by a veneer of unconsolidated Quaternary alluvial and colluvial deposits. Avery (1994) indicates groundwater in Ogden Valley occurs under perched, confined, and unconfined conditions in the valley fill to depths of 750 feet or more. A well-stratified lacustrine silt layer forms a leaky confining bed in the upper part of the valley-fill aquifer. The aquifer below the

confining beds is the principal aquifer, which is in primarily fluvial and alluvial-fan deposits. The principal aquifer is recharged from precipitation, seepage from surface water, and subsurface inflow from bedrock into valley fill along the valley margins (Avery, 1994). The confined aquifer is typically overlain by a shallow, unconfined aquifer recharged from surface flow and upward leakage. Groundwater flow is generally from the valley margins into the valley fill, and then toward the head of Ogden Canyon (Avery, 1994).

No site-specific groundwater information was available for the Project, but the Utah Department of Water Rights Well Driller's database shows five water wells near the eastern Project boundary (Figure 1). The drillers' logs for these wells report depths to static groundwater of from 25 to 50 feet, with a mean depth of 36.6 feet and a median depth of 30 feet. We anticipate groundwater conditions at the Project to be similar, though depths may vary locally with topography. Groundwater depths at the site also likely vary seasonally from snowmelt runoff and annually from climatic fluctuations, which would be typical for an alpine environment; and perched conditions above less-permeable, clay-rich bedrock layers are likely present in the subsurface that cause locally shallower groundwater levels. No groundwater was encountered in the test pits at the site, except for TP-11, although several test pits exposed evidence for past possible perched shallow groundwater (as discussed in Section 5.1). Given the above, our geologic cross sections (Section 5.4) assume groundwater is typically at a depth of around 30 feet, with a secondary perched groundwater zone in the upper 5 feet of weathered bedrock. We expect groundwater flow at the site to generally be to the northeast and east depending on topography.

4.0 GEOLOGY

4.1 Surficial Geology

The site is located on the western margin of Ogden Valley, a sediment-filled intermontane valley within the Wasatch Range, a major north-south trending mountain range marking the eastern boundary of the Basin and Range physiographic province (Stokes; 1977, 1986). Surficial geology of the site is mapped by Coogan and King (2016; Figure 2A) and McDonald (2020; Figure 2B). Coogan and King (2016) is a regional geologic map, whereas McDonald (2020) is a surficial geologic map for the Huntsville quadrangle. Both geologic maps indicate much of the Project is underlain by either landslide deposits of varying ages or Tertiary Norwood Formation bedrock. The Ogden Valley southwestern margin fault (aka West Ogden Valley fault) is also shown on both maps crossing the southwestern and western parts of the site, but is concealed beneath late Pleistocene- to Holocene-age unconsolidated sediments.

Coogan and King (2016) describe surficial geologic units in the site area on Figure 2A (from youngest to oldest) as follows:

> ***Qh, Qh?*** – *Human disturbances (Historical).* Mapped disturbances obscure original deposits or rocks by cover or removal; only larger disturbances that pre-date the 1984 aerial photographs used to map the Ogden 30 x 60- minute quadrangle are shown; includes engineered fill, particularly along Interstate Highways 80 and 84, the Union Pacific Railroad, and larger dams, as well as aggregate operations, gravel pits, sewage-treatment facilities, cement plant quarries and operations, brick plant and clay pit,

Defense Depot Ogden (Browning U.S. Army Reserve Center), gas and oil field operations (for example drill pads) including gas plants, and low dams along several creeks, including a breached dam on Yellow Creek.

Qal, Qal1, Qal2, Qal2? – *Stream alluvium and flood-plain deposits (Holocene and uppermost Pleistocene).* Sand, silt, clay, and gravel in channels, flood plains, and terraces typically less than 16 feet (5 m) above river and stream level; moderately sorted; unconsolidated; along the same drainage Qal2 is lower than Qat2 and has likely been subject to flooding, at least prior to dam building; present in broad plains along the Bear, Ogden, and Weber Rivers and larger tributaries like Deep, Cottonwood, East Canyon, Lost, and Saleratus Creeks, along Box Elder, Heiners, and Yellow Creeks, and in narrower plains of larger tributary streams; locally includes muddy, organic overbank and oxbow lake deposits; composition depends on source area, so in back valleys typically contains many quartzite cobbles recycled from the Wasatch Formation; mostly Holocene, but deposited after regression of Lake Bonneville from the late Pleistocene Provo shoreline; width in Morgan Valley is combined flood plain of Weber River and East Canyon and Deep Creeks; 6 to 20 feet (2-6 m) thick and possibly as much as 50 feet (15 m) along Weber River and thinner in the Kaysville quadrangle; greater thicknesses (>50 feet [15 m]) are reported in Morgan Valley (Utah Division of Water Rights, well drilling database), but likely include Lake Bonneville and older Pleistocene deposits.

Suffixes 1 and 2 indicate ages where they can be separated, with 1 including active channels and 2 including low terraces 10 to 20 feet (3-6 m) above the Weber and Ogden Rivers, and the South Fork Ogden River that may have been in the flood plain prior to damming of these waterways. Qal2 queried in low terraces above Bear River, Saleratus Creek, and Dry Creek where deposits may not be in the flood plain.

Qaf, Qafy, Qaf3, Qaf3?, Qaf4, Qaf4?, Qaf5 – *Alluvial-fan deposits (Holocene and Pleistocene).* Mostly sand, silt, and gravel that is poorly bedded and poorly sorted and that is not close to late Pleistocene Lake Bonneville and is geographically in the Huff Creek and upper Bear River drainages; variably consolidated; includes debris flows, particularly in drainages and at drainage mouths (fan heads); generally less than 60 feet (18 m) thick. Qaf with no suffix used where age uncertain or for composite fans where portions of fans with multiple ages cannot be shown separately at map scale; toes of some fans have been removed by human disturbances, so their age cannot be determined.

Where possible, subdivided into relative ages, indicated by letter and number suffixes (like Qa and Qat suffixes) and relative ages only apply to the local drainage, with unit Qafy being the lowest (youngest) fans and unit 3 may or may not post-date Lake Bonneville. Relative ages of these fans are partly based on heights above present drainages at drainage-eroded edge of fan. The relative age is queried where the age is uncertain, generally due to the height not fitting into the typical order of surfaces. The various deposits listed, Qafy and Qaf3 through Qaf5, are 20 to 140 feet (6-40 m) above and west of Saleratus Creek, and also above Yellow Creek and the Bear River. Qafy fans are active, impinge on present-day floodplains, divert active streams, and overlie low terraces.

Qac – *Alluvium and colluvium (Holocene and Pleistocene).* Unsorted to variably sorted gravel, sand, silt, and clay in variable proportions; includes stream and fan alluvium, colluvium, and, locally, mass-movement deposits too small to show at map scale; typically mapped along smaller drainages that lack flat bottoms; more extensive east of Henefer where Wasatch Formation (Tw) strata easily weather to debris that "chokes" drainages; 6 to 20 feet (2-6 m) thick. Some deposits are "perched" on benches 80 feet (25 m) and more above present-day drainages like Left Fork Heiners Creek (Heiners Creek quadrangle) and Harris Canyon (Henefer quadrangle). In the Devils Slide quadrangle, some deposits are "perched" on benches about 60 to 130 feet (18-40 m) above Quarry Cottonwood Canyon indicating the alluvium is at least partly Lake Bonneville age and older (see Qab and Qao in tables 1 and 2).

Qay, Qa2, Qa2?, Qa3, Qa3?, Qa4, Qa4?, Qa4-5, Qa5, Qa6 – *Alluvium (Holocene and Pleistocene).* Sand, silt, clay, and gravel in stream and alluvial-fan deposits that are not close to late Pleistocene Lake Bonneville and are geographically in the Huff Creek and upper Bear River drainages; variably sorted; variably consolidated; composition depends on source area; deposits lack fan shape of Qaf and are distinguished from terraces (Qat) based on upper surface sloping toward adjacent streams from sides of drainage, or are shown where fans and terraces are too small to show separately at map scale; Qay is at to slightly above present drainages and not incised by active drainages, so is the youngest unit; generally 6 to 20 feet (2-6 m) thick.

Age-number and letter suffixes on alluvium (undivided, channel, flood plain, terrace, and fan) that is not close to late Pleistocene Lake Bonneville are relative and only apply to the local drainage, with suffix 2 being the second youngest; the relative age is queried where age uncertain, generally due to the height not fitting into the typical order of surfaces. The various numbered deposits listed, Qa2 through Qa6, are 20 to 180 feet (6-55 m) above the Bear River, Saleratus Creek, and Yellow Creek. Qa5 and Qa3? are only used in stacked units (Qa5/Tfb and Qa3?/Tfb).

Qafp, Qafp?, Qafb, Qafb?, Qafpb, Qafpb? – *Lake Bonneville-age alluvial-fan deposits (upper Pleistocene).* Like undivided alluvial fans, but height above present drainages appears to be related to shorelines of Lake Bonneville and is within certain limits (see table 1); these fans are inactive, unconsolidated to weakly consolidated, and locally dissected; fans labeled Qafp and Qafb are related to the Provo (and slightly lower) and Bonneville shorelines of late Pleistocene Lake Bonneville, respectively, while unit Qafpb is used where fans may be related to the Provo or Bonneville shoreline (for example Qafpb is ~40 feet [12 m] above Lost Creek Valley), or where fans of different ages cannot be shown separately at map scale; Qafp fans typically contain well-rounded, recycled Lake Bonneville gravel and sand and are moderately well sorted; generally 10 to less than 60 feet (3-18 m) thick. Lake Bonneville-age fans are queried where relative age is uncertain (see Qaf for details); fans labeled Qafpb? are above the Bonneville shoreline and might be Qafo or like Qafm; see the note under Qao about two possible ages of older alluvium (Qao, Qato, and Qafo).

Most of the Lake Bonneville-age fans in the James Peak quadrangle are far from the Bonneville shoreline and their age is inferred from their stratigraphic relationship(s) to coeval Pinedale glacial outwash (see age equality in Table 3).

The channels (Qafp/Qdlb) on the Weber River delta and Lake Bonneville fines (Qafp on Qlfb) probably record scour and fill during the rapid drawdown of the lake as it fell from the Bonneville shoreline to the Provo shoreline.

Qmc – *Landslide and colluvial deposits, undivided (Holocene and Pleistocene).* Poorly sorted to unsorted clay- to boulder-sized material; mapped where landslide deposits are difficult to distinguish from colluvium (slope wash and soil creep) and where mapping separate, small, intermingled areas of landslide and colluvial deposits is not possible at map scale; locally includes talus and debris flow and flood deposits; typically mapped where landslides are thin ("shallow"); also mapped where the blocky or rumpled morphology that is characteristic of landslides has been diminished ("smoothed") by slope wash and soil creep; composition depends on local sources; 6 to 40 feet (2-12 m) thick. These deposits are as unstable as other landslide units (Qms, Qmsy, Qmso).

Qms, Qms?, Qmsy, Qmsy?, Qmso, Qmso? – *Landslide deposits (Holocene and upper and middle? Pleistocene).* Poorly sorted clay- to boulder sized material; includes slides, slumps, and locally flows and floods; generally characterized by hummocky topography, main and internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with time and amount of water in material during emplacement; Qms may be in contact with Qms when landslides are different/distinct; thickness highly variable, up to about 20 to 30 feet (6-9 m) for small slides, and 80 to 100 feet (25-30 m) thick for larger landslides. Qmsy and Qmso queried where relative age uncertain; Qms queried where classification uncertain. Numerous landslides are too small to show at map scale and more detailed maps shown in the index to geologic mapping should be examined.

Qms without a suffix is mapped where the age is uncertain (though likely Holocene and/or late Pleistocene), where portions of slide complexes have different ages but cannot be shown separately at map scale, or where boundaries between slides of different ages are not distinct. Estimated time of emplacement is indicated by relative-age letter suffixes with: Qmsy mapped where landslides deflect streams or failures are in Lake Bonneville deposits, and scarps are variably vegetated; Qmso typically mapped where deposits are "perched" above present drainages, rumpled morphology typical of mass movements has been diminished, and/or younger surficial deposits cover or cut Qmso. Lower perched Qmso deposits are at Qao heights above drainages (95 ka and older) and the higher perched deposits may correlate with high level alluvium (QTa) (likely older than 780 ka) (see table 1). Suffixes y and o indicate probable Holocene and Pleistocene ages, respectively, with all Qmso likely emplaced before Lake Bonneville transgression. These older deposits are as unstable as other slides, and are easily reactivated with the addition of water, be it irrigation or septic tank drain fields.

Qmdf, Qmdf? – *Debris- and mud-flow deposits (Holocene and upper and middle? Pleistocene).* Very poorly sorted, clay- to boulder-sized material in unstratified deposits characterized by rubbly surface and debris-flow levees with channels, lobes, and mounding; variably vegetated; in drainages typically form mounds, an indication of more viscous Qmdf, rather than being flat like unit Qac; Qmdf queried where may not

be mostly debris- and mud-flow deposits; many debris flows cannot be shown separately from alluvial fans at map scale; 0 to 40 feet (0-12 m) thick. Age(s) uncertain; deposits in drainages likely post-date the Provo shoreline of Lake Bonneville, while deposits above drainages, like north of the Right Hand Fork Peterson Creek, are likely as old as Bull Lake glaciation, but could pre-date Bull Lake glaciation and be middle Pleistocene.

Qls, Qls?, Qlsp, Qlsb, Qlsb? – *Lake Bonneville sand (upper Pleistocene).* Mostly sand with some silt and gravel deposited nearshore below and near the Provo shoreline (Qlsp) and between the Provo and Bonneville shorelines (Qlsb); Qls mapped downslope from slope break below Provo shoreline beach deposits where thin Lake Bonneville regressional sand may overlie transgressional sand; grades downslope into unit Qlf with decreasing sand content and laterally with more gravel into units Qdlp, Qdlb, and upslope with more gravel into unit Qlgb; Qls and Qlsb queried where grain size or unit identification uncertain; may be as much as 75 feet (25 m) thick, and thickest near Ogden; typically less than 20 feet (6 m) thick in Morgan Valley; may include small deltas and deltas that lack typical delta shape.

Qla, Qla? – *Lake Bonneville lacustrine deposits and post- and pre-Lake Bonneville alluvial deposits, undivided (Holocene and upper? Pleistocene).* Mostly poorly sorted and poorly bedded sand, silt, and clay, with some gravel; mapped where Lake Bonneville deposits are reworked by later stream action or covered by thin stream and fan deposits, and where lake deposits are thin and overlie older alluvial deposits; unit queried where may be dominantly alluvium; deposits typically eroded from shallow Norwood Formation; mostly mapped near Bonneville shoreline; also mapped in Peterson quadrangle along upper Deep Creek above Bonneville shoreline where lake deposits seem to indicate landslide dam of creek; thickness uncertain.

Qdlb, Qdlb? – *Transgressive and Bonneville-shoreline deltaic and lacustrine deposits (upper Pleistocene).* Mostly sand, silty sand, and gravelly sand deposited near shore in Lake Bonneville; extensive at mouth of Weber Canyon; related to transgression to and occupation of the Bonneville shoreline with lacustrine deposits covering deltaic deposits; in Morgan Valley and near mouth of Coldwater Canyon (North Ogden quadrangle) contain more cobbles and overall more gravel; 0 to at least 40 feet (12 m) thick in Ogden and Morgan Valleys; about 400 feet (120 m) thick in bluff at the mouth of Weber Canyon. These deposits are prone to slope failures.

Qadb, Qadb? – *Transgressive and Bonneville-shoreline alluvial and deltaic deposits (upper Pleistocene).* Cobbly gravel, sand, silt, and clay deposited above (subaerial) and in Lake Bonneville (subaqueous); typically mapped where shorelines are obscure, so that line cannot be drawn between alluvial fan and delta; include rounded to subangular clasts in a matrix of sand and silt with interbeds of sand and silt; mapped above the Provo shoreline and deposited as lake transgressed to and was at the Bonneville shoreline; typically better sorted delta and lake deposits over poorly sorted alluvial-fan deposits; Qadb prominent along Deep Creek (Morgan quadrangle) and Strawberry Creek (Snow Basin quadrangle); 0 to at least 40 feet (0-12+ m) thick.

Note that the Bonneville-shoreline fan-delta unit (Qadb), at 80 to 100 feet (24-30 m) above present drainages, is typically higher than the related alluvial units (Qab, Qafb) (see table 1). A fan-delta is built when an alluvial fan enters a lake or ocean, and includes both the fan and the delta.

Qafp, Qafp?, Qafb, Qafb?, Qafpb, Qafpb? – *Lake Bonneville-age alluvial-fan deposits (upper Pleistocene)*. Like undivided alluvial fans, but height above present drainages appears to be related to shorelines of Lake Bonneville and is within certain limits (see table 1); these fans are inactive, unconsolidated to weakly consolidated, and locally dissected; fans labeled Qafp and Qafb are related to the Provo (and slightly lower) and Bonneville shorelines of late Pleistocene Lake Bonneville, respectively, while unit Qafpb is used where fans may be related to the Provo or Bonneville shoreline (for example Qafpb is ~40 feet [12 m] above Lost Creek Valley), or where fans of different ages cannot be shown separately at map scale; Qafp fans typically contain well-rounded, recycled Lake Bonneville gravel and sand and are moderately well sorted; generally 10 to less than 60 feet (3-18 m) thick. Lake Bonneville-age fans are queried where relative age is uncertain (see Qaf for details); fans labeled Qafpb? are above the Bonneville shoreline and might be Qafo or like Qafm; see the note under Qao about two possible ages of older alluvium (Qao, Qato, and Qafo).

Most of the Lake Bonneville-age fans in the James Peak quadrangle are far from the Bonneville shoreline and their age is inferred from their stratigraphic relationship(s) to coeval Pinedale glacial outwash (see age equality in Table 3).

The channels (Qafp/Qdlb) on the Weber River delta and Lake Bonneville fines (Qafp on Qlfb) probably record scour and fill during the rapid drawdown of the lake as it fell from the Bonneville shoreline to the Provo shoreline.

Qao, Qao? – *Older alluvium (mostly upper Pleistocene)*. Sand, silt, clay, and gravel above and likely older than the Bonneville shoreline; mapped on surfaces above Lake Bonneville-age alluvium (Qap, Qab, Qapb); deposits lack fan shape (Qaf) and are distinguished from terraces (Qat) based on upper surface sloping toward adjacent streams from sides of drainage; also shown where areas of fans and terraces are too small to show separately at map scale; composition depends on source area; at least locally up to 110 feet (34 m) thick. Queried where classification or relative age is uncertain (see Qa for details); for example near head of Saleratus Creek.

Qafo, Qafo? – *Older alluvial-fan deposits (mostly upper Pleistocene)*. Incised and at least locally dissected fans of mostly sand, silt, and gravel that is poorly bedded and poorly sorted; includes debris flows, particularly in drainages and at drainage mouths (fan heads); older fans are typically above the Bonneville shoreline, with an eroded bench at the shoreline; upstream and above the Bonneville shoreline, unit Qafo is topographically higher than fans graded to the Bonneville shoreline (Qafb), and is typically dissected; generally less than 60 feet (18 m) thick. In Mantua Valley, exposed thickness up to about 100 feet (30 m), but water wells (sections 26 and 27, T. 9 N., R. 1 W.) were still in gravelly to bouldery valley fill at depths of 505 and 467 feet (154 and 142 m), respectively, and red coloration that may indicate Wasatch Formation bedrock was not noted (see Bjorklund and McGreevy, 1973, p. 16).

Qafo queried where relative age is uncertain (see Qaf for details), for example in Mantua quadrangle where it is as high as Qafoe in Morgan Valley (see table 1). Qafo queried in East Canyon graben because the deposits are not dissected and some deposits mantle Qafoe (see also unit Qafm above), resulting in a reversal of relative height and only local incision. These irregular deposits are likely the result of salt movement in the East Canyon graben. Our Qafo is roughly shown to south by Bryant (1990) as Qgp (pediment gravel); farther south he showed Qoa (dissected alluvium) adjacent to the East Canyon fault, which may be the QTaf or Qafoe we mapped.

Amino-acid age estimates presented in Sullivan and Nelson (1992) imply Qafo north of Morgan considerably predates Lake Bonneville and is middle Pleistocene in age (>400 ka). However, the Bonneville shoreline is obscure on this fan, and soil-carbonate age estimates (>70-100 ka) and other amino-acid age estimates (~98-155 ka) in Sullivan and others (1988) imply these older fans are related to Bull Lake glaciation (95,000 to 130,000 years old; see Chadwick and others, 1997; Phillips and others, 1997). As noted under Qao, Qafo deposits may contain two ages (levels) of alluvial surfaces that are not easily recognized in Morgan Valley but are recognized upstream in the Henefer and Lost Creek Valleys (Devils Slide quadrangle) and along the North and South Forks of Ogden River.

Tn, Tn? – *Norwood Formation (lower Oligocene and upper Eocene).* Typically light-gray to light-brown altered tuff (claystone), altered tuffaceous siltstone and sandstone, and conglomerate; unaltered tuff, present in type section south of Morgan, is rare; locally colored light shades of red and green; variable calcareous cement and zeolitization; involved in numerous landslides of various sizes; estimate 2000-foot (600 m) thick in exposures on west side of Ogden Valley (based on bedding dip, outcrop width, and topography). Norwood Formation queried where poor exposures may actually be surficial deposits. For detailed Norwood Formation information see description under heading "Sub-Willard Thrust - Ogden Canyon Area" since most of this unit is in and near Morgan Valley and covers the Willard thrust, Ogden Canyon, and Durst Mountain areas.

Zpu, Zpu? – *Formation of Perry Canyon, Upper member (Neoproterozoic).* Olive drab to gray, thin-bedded slate to argillite to phyllite to micaceous meta-siltstone to meta-graywacke to meta-sandstone in variable proportions such that unit looks like both the "greywacke-sandstone" and "mudstone" members of previous workers; unit identification based on underlying diamictite in Mantua quadrangle; rare meta-gritstone and meta-diamictite (actually conglomerate?); locally schistose; meta-sandstone contains poorly sorted lithic, quartz, and feldspar grains in silty to micaceous matrix; meta-sandstone is quartzose in outcrops on west margin of Mantua quadrangle (Crittenden and Sorensen, 1985a) and medial zone of sandstone is feldspathic east of Ogden Valley, where mapped and described as argillite member of Maple Canyon Formation by Crittenden (1972) and Sorensen and Crittenden (1979); thickness uncertain, but appears to be about 600 feet (180 m) thick on west flank of Grizzly Peak in the Mantua quadrangle and about 1000 feet (300 m) thick between Ogden Canyon and North Ogden divide. In Ogden Valley typically non-resistant and tan weathering such that gray to green to dark-gray fresh color is seldom seen except in cut slopes and excavations. This unit is prone to slope failures.

Zmcg, Zmcg? – *Maple Canyon Formation, Lower (green arkose) member (Neoproterozoic).* Grayish-green, fine-grained arkosic (feldspathic) meta-sandstone and sandy argillite (meta-graywacke), with local quartzite lenses up to 200 feet (60 m) thick; weathers darker gray to brown to greenish-gray and greenish-brown; 500 to 1000 feet (150-305 m) thick and lower thickness would eliminate the need for faulting in southwest part of Huntsville quadrangle. This unit is prone to slope failures.

McDonald (2020) describes surficial geologic units in the site area on Figure 2B (from youngest to oldest) as follows:

Qmsh – *Landslide deposits, historical (Holocene).* Poorly sorted clay- to boulder-sized material in slides, slumps, flows, and landslide complexes; generally characterized by hummocky topography, head, lateral, and/or internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with increasing age and/or rate of movement; includes landslides having historical movement that has been observed, documented, or is apparent on aerial imagery; thickness highly variable.

Qaly – *Stream alluvium and floodplain deposits (Holocene to upper Pleistocene).* Poorly to moderately sorted, pebble to cobble gravel with a matrix of sand, silt, and clay in channels and floodplains and low terraces typically less than 10 feet (3 m) above modern channel level; angular to subangular grains; composition depends on source area; moderately sorted within beds; locally includes muddy overbank and organic-rich marsh deposits; present along the major valley-bottom streams including the North, Middle, and South Forks of the Ogden River, and Wolf Creek; 0 to 20 feet (0–6 m) thick.

Qat1 – *Stream terrace deposits (middle Holocene? to upper Pleistocene?).* Poorly to well sorted pebble to cobble gravel in a matrix of sand, silt and clay in terraces above modern
streams and/or floodplains; subangular to subrounded grains; poorly to moderately bedded; typically about 5 to 10 feet (1–3 m) above modern channels; 0 to 10 feet (0–3 m) thick.

Qafy – *Younger alluvial-fan deposits (Holocene to upper Pleistocene).* Poorly to moderately sorted pebble to cobble gravel with silt, sand and minor clay matrix; angular to subangular grains; poorly to moderately bedded; composition depends on source area; includes debris flows, debris floods, and channel deposits on large alluvial fans notably at the mouth of Geertzen Canyon where a large, nearly 1.5-mile-wide (2.5 km) by over 1-mile-long (1.5 km) fan exists; elsewhere, smaller alluvial fans grade into active stream channels or lacustrine surfaces; the Geertzen Canyon fan contains abundant cobbles and boulders derived from Paleozoic quartzites and Paleogene conglomeratic surface deposits above and flanking the northeast margin of Ogden Valley; 0 to 30 feet (0–6 m) thick.

Qmsy – *Landslide deposits, younger (Holocene to upper Pleistocene?)* – Poorly sorted clay- to boulder-sized material in slides, slumps, flows, and landslide complexes; generally characterized by hummocky topography, head, lateral, and/or internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with increasing age and/or rate of movement; morphology suggests likely post-Lake Bonneville movement with relatively sharp and pronounced landslide deformation features and may include parts that are historic and active; thickness highly variable.

Qla – *Lacustrine and alluvial deposits, undivided (Holocene to upper Pleistocene).* Poorly to moderately sorted silt, sand, clay, and gravel; subangular to rounded clasts; moderately to well-bedded; includes Lake Bonneville-age transgressional deposits below and near the highstand shoreline and post-Bonneville stream alluvium overlain by, interbedded with, and/or reworked by streams; includes alluvial deposits aggraded to the Provo shoreline that are likely time equivalent to the overflowing and regressive phases of Lake Bonneville; 1 to 10 feet (0.3–3 m) thick.

Qac – *Alluvium and colluvium (Holocene to middle Pleistocene?).* Unsorted to variably sorted silt, sand, gravel, clay, cobble and boulder in variable proportions and roundness; includes stream and fan alluvium, colluvium, sheetwash deposits, and locally mass-movement deposits that are too small to map separately at map scale; typically mapped along drainages bounded by hillslopes where colluvium grades into alluvium without distinct break in slope and in smaller drainages lacking flat bottoms or too small to subdivide at map scale; 0 to 20 feet (0–6 m) thick.

Qms – *Landslide deposits, undifferentiated (Holocene to middle Pleistocene?).* Poorly sorted clay- to boulder-sized material in slides, slumps, flows, and landslide complexes; generally characterized by hummocky topography, head, lateral, and/or internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with increasing age and/or rate of movement; mapped where relative age cannot be distinguished or where landslide complexes have portions with different ages and/or rates of activity; thickness highly variable.

Qmc – *Mass-movement and colluvial deposits, undivided (Holocene to middle Pleistocene?).* Poorly sorted to unsorted, mostly clay, silt, sand, gravel, cobble, and boulder; angular to rounded clasts; nonbedded; mapped on slopes where individual landslides, slumps, slope wash, and soil creep are difficult to distinguish from one another; often characterized by hummocky slopes composed of numerous slumps of various sizes and ages includes soil creep, sappy areas, talus, slope wash, and debris-flow deposits but lack clear landslide scarps and lateral margins to allow separate mapping; typically forms on slopes overlying clay-bearing, landslide prone bedrock units—notably Neogene volcaniclastics and argillic Proterozoic formations; 0 to 40 feet (0–12 m) thick.

Qafb – *Younger alluvial-fan deposits (upper Pleistocene).* Poorly sorted pebble to cobble gravel with silt, sand and minor clay matrix; angular to subangular grains; poorly to moderately bedded; composition depends on source area; includes debris

flows, debris floods, and channel deposits that grade into Lake Bonneville transgressive or highstand shoreline deposits or at a height above modern fan surfaces consistent with correlative deposits; 0 to 30 feet (0–6 m) thick.

Qls – *Lake Bonneville sand and gravel deposits (upper Pleistocene).* Moderately to poorly sorted, moderately to well-bedded sand and gravel with silt and clay; subangular to rounded clasts; deposited in transgressive Lake Bonneville nearshore environments; includes thin clay and silt interbeds deposited off shore; may grade laterally into Qlf or Qdl; typically less than 20 feet (6 m) thick.

Qlf – *Lake Bonneville fine-grained deposits (upper Pleistocene)*. Moderately to well-sorted and moderately bedded to thinly laminated clay, silt, and sand deposited during the transgression and highstand of Lake Bonneville; rounded to well-rounded clasts; deposited in shallow to moderately deep water; typically overlies pre-Bonneville alluvium and may overlie middle Pleistocene Little Valley lake cycle (Scott and others, 1983; Oviatt and others, 1999) fine-grained deposits in the central part of the valley; 5 feet (2 m) thick or greater.

Qao – *Older alluvium (upper to middle Pleistocene?).* Poorly to moderately sorted sand, silt, clay, and gravel on surfaces; subangular to subrounded grains; poorly to moderately bedded; deposits are typically isolated remnants in the valley or along valley margin drainages; located above and presumed older than Lake Bonneville-age alluvium and likely same age as Qafo but lacking alluvial-fan morphology; 10 to 50 feet (3–15 m) thick.

Qafo – *Older alluvial-fan deposits (upper to middle Pleistocene?).* Poorly to moderately sorted pebble to cobble gravel with a matrix of silt, sand and clay; subangular to subrounded clasts; poorly bedded; fans are typically eroded and incised locally with isolated fan remnants, deposits may be somewhat lithified, and characterized by a reddish, clay-rich matrix; deposits are likely early to middle Pleistocene-age and may include deposits previously mapped as Huntsville Fanglomerate (Eardley, 1955; Lofgren; 1955; Coody, 1957) and may include deposits where fan age is uncertain, or for composite fans, where parts of fans with different ages cannot be shown separately at map scale; 10 to 50 feet (3–15 m) thick.

Qmso – *Landslide deposits, older (upper to middle Pleistocene?)* – Poorly sorted clay- to boulder-sized material in slides, slumps, flows, and landslide complexes; generally characterized by hummocky topography, head, lateral, and/or internal scarps, and chaotic bedding in displaced blocks; composition depends on local sources; morphology becomes more subdued with increasing age and/or rate of movement; mapped where deposits generally have a more subdued morphology and are likely early Holocene and Pleistocene in age; include very large complexes underlain by argillite-rich bedrock where entire hillsides appear to be part of a landslide complex but where defining their boundaries are often difficult; thickness highly variable.

BR *– Rock (Tertiary to Precambrian)*. Mapping of bedrock structure and stratigraphy is beyond the scope of this project. Sorenson and Crittenden (1979) provide the most recent published 1:24,000-scale geologic map of the Huntsville quadrangle. Coogan and King (2016) performed a cursory revision of the bedrock of Sorenson and Crittenden (1979) in compiling the Ogden 30′ x 60′ quadrangle. For more information, refer to these maps and other maps and studies cited in the Previous Work section of this report.

Citations, tables, and figures above are not provided herein, but are in Coogan and King (2016) or McDonald (2020).

4.2 Seismotectonic Setting

The property is located at the western margin of Ogden Valley, a roughly 40-square mile back valley described by Gilbert (1928) as a structural trough similar to Cache and Morgan Valleys to the north and south, respectively. The back valleys of the northern Wasatch Range are in a transition zone between the Basin and Range and Middle Rocky Mountains physiographic provinces (Stokes, 1977, 1986). The Basin and Range is characterized by a series of generally north-trending elongate mountain ranges, separated by predominately alluvial and lacustrine sediment-filled valleys and typically bounded on one or both sides by major normal faults (Stewart, 1978). The boundary between the Basin and Range and Middle Rocky Mountains provinces is marked by the Wasatch fault zone (WFZ) at the base of the Wasatch Range. Late Cenozoic normal faulting, a characteristic of the Basin and Range, began between about 17 and 10 million years ago in the Nevada (Stewart, 1980) and Utah (Anderson, 1989) portions of the province. The faulting is a result of a roughly east-west directed, regional extensional stress regime that has continued to the present (Zoback and Zoback, 1989; Zoback, 1989). The back valleys are morphologically similar to valleys in the Basin and Range, but exhibit less structural relief (Sullivan and others 1986).

Ogden Valley occupies a structural trough created by up to 2,000 feet of vertical displacement on normal faults bounding the east and west sides of the valley. The Ogden Valley southwestern margin fault (aka West Ogden Valley fault) is mapped trending across the site slightly west of the proposed home. Coogan and King (2016) map the fault as concealed (Figure 2, dotted line) beneath Pleistocene- to Holocene-age alluvium in the area. Sullivan and others (1986) indicate the most recent movement on this fault is pre-Holocene. The nearest active (Holocene-age) fault to the site is the Weber section of the WFZ about 3.9 miles to the west.

The site is also in the central portion of the Intermountain Seismic Belt (ISB), a generally north-south trending zone of historical seismicity along the eastern margin of the Basin and Range province extending from northern Arizona to northwestern Montana (Sbar and others, 1972; Smith and Sbar, 1974). At least 16 earthquakes of magnitude 6.0 or greater have occurred within the ISB since 1850; the largest of these earthquakes was a M 7.5 event in 1959 near Hebgen Lake, Montana. None of these earthquakes occurred along the

WFZ or other known late Quaternary faults (Arabasz and others, 1992; Smith and Arabasz, 1991). The closest event was the 1934 Hansel Valley (M 6.6) event north of the Great Salt Lake. The March 18, 2020 M 5.7 Magna earthquake[1] reportedly showed a style, location, and slip depth consistent with an earthquake on the WFZ system. Despite being less than magnitude 6.0, this earthquake damaged multiple buildings and was felt from southern Idaho to south-central Utah[2]. The University of Utah Seismograph Stations indicates the Magna earthquake[3] was weakly felt in Ogden Valley, with a peak acceleration of about 0.005 g and an instrument intensity of II-III (on a Roman numeral scale of I-X).

4.3 Lake Bonneville History

Lakes occupied nearly 100 basins in the western United States during late-Quaternary time, the largest of which was Lake Bonneville in northwestern Utah. The Bonneville basin consists of several topographically closed basins created by regional extension in the Basin and Range (Gwynn, 1980; Miller, 1990), and has been an area of internal drainage for much of the past 15 million years. Lake Bonneville consisted of numerous topographically closed basins, including the Salt Lake and Cache Valleys (Oviatt and others, 1992). Sediments from Lake Bonneville are mapped in the northeast and southeast parts of the Project.

Timing of events related to the transgression and regression of Lake Bonneville are indicated in Oviatt (2015). Approximately 30,000 years ago, Lake Bonneville began a slow transgression (rise) to its highest level of 5,160 to 5,200 feet above mean sea level. The lake rise eventually slowed as water levels approached an external basin threshold in northern Cache Valley at Red Rock Pass near Zenda, Idaho. Lake Bonneville reached the Red Rock Pass threshold and occupied its highest shoreline, termed the Bonneville beach, around 18,000 years ago. Headward erosion of the Snake River-Bonneville basin drainage divide, possibly combined with landsliding in the threshold area, then caused a catastrophic incision that caused the lake level to lower by about 425 feet in less than a year (Jarrett and Malde, 1987; O'Conner, 1993). Following the Bonneville flood, the lake stabilized and formed a lower shoreline referred to as the Provo shoreline up to about 16,000 years ago. Climatic factors then caused the lake to regress rapidly from the Provo shoreline, and by about 13,000 years ago the lake had eventually dropped below historic levels of Great Salt Lake. Oviatt and others (1992) deem this low stage the end of the Bonneville lake cycle. Great Salt Lake then experienced a brief transgression between 12,800 and 11,600 years ago to the Gilbert level at about 4,250 feet before receding to and remaining within about 20 feet of its historic average level (Lund, 1990; Oviatt, 2015). The highest Bonneville shoreline is mapped discontinuously in the eastern part of the Project on Figures 2A and 2B at an elevation of about 5,200 feet. Various sub-Bonneville transgressive shorelines are also mapped at lower elevations on Figures 2A and 2B.

[1] https://earthquake.usgs.gov/earthquakes/eventpage/uu60363602/executive
[2] https://www.ksl.com/article/46731630/
[3] https://earthquakes.utah.gov/magna-quake/#

5.0 SITE CHARACTERIZATION

Site conditions and geology were interpreted through an integrated compilation of data, including a review of literature and mapping from previous studies conducted in the area (Western Geologic, 2006, 2018a and 2018b; Coogan and King, 2016; and McDonald, 2020); excavation, logging and field interpretation of 67 test pits; field reconnaissance of the site in conjunction with the subsurface exploration; photogeologic analyses of 2012 high-resolution aerial imagery; and GIS analyses of geoprocessed 2016 LIDAR terrain data.

5.1 Subsurface Investigation

Sixty-seven walk-in test pits (short trenches) were excavated at the Project to assess subsurface conditions. The test pits were logged by Bill D. Black, P.G., of Western Geologic July 27 through August 6, and on November 22, 2021, concurrently with the Project geotechnical investigation conducted by Christensen Geotechnical. Locations of the test pits are shown on Plate 1. The test pit locations were measured using a hand-held GPS unit and by trend and distance methods. The test pits were logged at a scale of 1-inch equals five feet (1:60) following methodology in McCalpin (1996), and digitally photographed at 5-foot intervals to document the exposures. The photos are not provided herein, but are available on request. Logs of the test pits are provided on Figures 3A-3Z and Figures 4A-4H. Stratigraphic interpretations and descriptions are provided on the logs. Explored depth was limited in some test pits due to excavation refusal.

Except for TP-11, no groundwater was observed in the test pits to their explored depths. However, iron-oxide staining or highly weathered bedrock suggestive of seasonal perched groundwater was observed in TP-4, TP-15, and TP-36. Weathered bedrock was exposed in all of the test pits, except for TP-5, TP-9, TP-29, TP-37, TP-50 and TP-58. The bedrock was generally overlain by late Pleistocene mass wasting colluvium. Holocene mass wasting colluvium was observed in TP-2, TP-28, TP-29 and TP-30. Late Pleistocene to Holocene mixed alluvium and colluvium was observed in TP-37, TP-40 and TP-50.

5.2 Empirical Observations

On July 27 through August 6, and on November 22, 2021, Mr. Bill D. Black, P.G., of Western Geologic conducted a reconnaissance of the property to observe geomorphic and surficial conditions. Weather conditions varied. Due to the large Project size, steep slopes and heavy vegetation in some areas, not all areas of the Project were accessed or observable.

The site is on the western margin of Ogden Valley on slopes overlooking Ogden Valley. Native vegetation consists of mature trees, various brush, broadleaf weeds and grasses. Two perennial streams (Coal Hollow and Grover Hollow creeks) cross the Project, and several intermittent and ephemeral drainages also head within the Project. There are also several small seasonal ponds at the Project and at least three reported spring areas. Both perennial drainages were flowing at the time of our field investigation, although the ponds and intermittent drainages all appeared dry. Slopes at the site are steep and heavily

vegetated in some areas. Much of the site is typified by eroded landslide deposits overlying and encircling various weathered bedrock knobs and ridges. The landslide morphology appeared subdued. No evidence for recent or ongoing landslides or slope instability was observed. Except for the above and various areas of alluvial and colluvial deposition along Coal Hollow and Grover Hollow creeks, likely from seasonal floods, no evidence of other geologic hazards was observed.

5.3 Air Photo Observations

High-resolution color orthophotography from 2012 and bare earth DEM LIDAR imagery from 2016 were reviewed to obtain information about the geomorphology of the Project area. The 2012 aerial imagery and LIDAR analysis are provided on Plates 1 and 2 at a scale of 1 inch equals 400 feet (1:4,800). Surficial geology of the Project is shown on Plate 3 based on the mapping in Coogan and King (2016, Figure 2A), McDonald (2020, Figure 2B), and our onsite subsurface data, empirical observations, and air photo interpretation. Plate 2 shows slope steepness and aspect varies across at the site, though much of the site is on slopes gentler than 20 percent (5:1 horizontal to vertical; unshaded areas).

The Project is in an area underlain mainly by Tertiary-age Norwood Formation bedrock with a veneer of mass wasting colluvium from various pre- and post-Lake Bonneville landslides. Most of the landslide deposits likely predate when Lake Bonneville occupied Ogden Valley. Thickness of the colluvium varies, but is generally less than 10 feet. However, four Holocene-age landslide deposits are present in the southwest and north parts of the Project (unit Qmsy, Plates 1-3). TP-29 and TP-30 in one of these landslides showed evidence for multiple movement episodes. Coal Hollow and Grover Hollow creeks also flow across the Project. No alluvial fans are mapped at the site, but several areas of mixed alluvial and colluvial deposits are found along the creeks, likely from seasonal floods (unit Qac, Plates 1-3). We anticipate that these creeks are mainly transport and erosion zones for small debris flow and floods, with deposition principally in the alluvial fans (unit Qafy, Plates 1-3) in Ogden Valley east of the Project. The Ogden Valley southwestern margin fault crosses the southwest and west parts of the Project, but is concealed beneath late Pleistocene to Holocene surficial deposits and only approximately located (Plates 1-3, dotted bold line). Sullivan and others (1986) indicate the most recent movement on this fault is pre-Holocene. No evidence for other geologic hazards was observed on the air photos at the site or in the area.

5.4 Cross Sections

Figures 5A-5R show 18 geologic cross sections (A-A' through R-R'), as located on Plates 1-3, across various steep slopes at the site shown on Plate 2. Units and contacts are inferred based on subsurface data from the test pits (Figures 3A-Z and 4A-H), and the surficial geologic mapping on Plate 3. The topographic profiles are based on geoprocessed 2016 LIDAR data. The LIDAR data provide a snapshot of topographic conditions at the time of acquisition; past, present and future surficial topography may vary. Bedding dips were determined using https://app.visiblegeology.com/apparentDip.html based on the cross section trend and test pit strike/dip data. We caution that the cross sections are based on

limited subsurface data, particularly given the depth of exploration. Units and contacts should therefore be considered approximate and inferred, and variations should be expected at depth and laterally. Groundwater in the cross sections is inferred to be at a depth of about 30 feet (as discussed in Section 3.0), varying with topography. A perched groundwater zone is also shown in the upper 5 feet of the weathered bedrock.

6.0 GEOLOGIC HAZARDS

Assessment of potential geologic hazards and the resulting risks imposed is critical in determining the suitability of the site for development. Table 1 below shows a summary of the geologic hazards reviewed at the site, as well as a relative (qualitative) assessment of risk to the Project for each hazard.

Table 1. *Geologic hazards summary.*

Hazard	H	M	L
Earthquake Ground Shaking	X		
Surface Fault Rupture			X
Liquefaction and Lateral-spread Ground Failure			X
Tectonic Deformation			X
Seismic Seiche and Storm Surge			X
Stream Flooding			X
Shallow Groundwater		X	
Landslides and Slope Failures	X		
Debris Flows and Floods			X
Rock Fall			X
Problem Soil and Rock	X		

A "high" hazard rating (H) indicates a hazard is present at the site (whether currently or in the geologic past) that is likely to pose significant risk and/or may require further study or mitigation techniques. A "moderate" hazard rating (M) indicates a hazard that poses an equivocal risk. Moderate-risk hazards may also require further studies or mitigation. A "low" hazard rating (L) indicates the hazard is not present, poses little or no risk, and/or is not likely to significantly impact the Project. Low-risk hazards typically require no additional studies or mitigation. We note that these hazard ratings represent a conservative assessment for the entire site and risk may vary in some areas. Careful selection of development areas can minimize risk by avoiding known hazard areas.

6.1 Earthquake Ground Shaking

Ground shaking refers to the ground surface acceleration caused by seismic waves generated during an earthquake. Strong ground motion is likely to present a significant risk during moderate to large earthquakes located within a 60 mile radius of the Project area (Boore and others, 1993). Seismic sources include mapped active faults, as well as a

random or "floating" earthquake source on faults not evident at the surface. The Utah Geological Survey Quaternary Fault Database (Black and others, 2003; January 2017 update) shows numerous class A faults within 60 miles of the Project that may pose potential seismic sources.

The extent of property damage and loss of life due to ground shaking depends on factors such as: (1) proximity of the earthquake and strength of seismic waves at the surface (horizontal motions are the most damaging); (2) amplitude, duration, and frequency of ground motions; (3) nature of foundation materials; and (4) building design. Based on 2018 IBC provisions, a site class of C (stiff soil), and a risk category of II, calculated seismic values for the site (centered on 41.296973° N, -111.839527° W) are summarized below:

Table 2. *Seismic hazards summary.*

Type	Value
S_S	*0.984 g*
S_1	*0.352 g*
S_{MS} (F_a x S_S)	*1.18 g*
S_{M1} (F_v x S_1)	*0.528 g*
S_{DS} (2/3 x S_{MS})	*0.787 g*
S_{D1} (2/3 x S_{M1})	*0.352 g*
Seismic Design Category, SDC	*D*
Site Coefficient, F_a	*= 1.2*
Site Coefficient, F_v	*= 1.5*
Site-Modified Peak Ground Acceleration, PGA_M	*= 0.524 g*

Given the above information, we rate the hazard from earthquake ground shaking as high. Earthquake ground shaking is a regional hazard common to all Wasatch Front areas. The hazard is mitigated by design and construction of homes in accordance with the current adopted building code. The PGA_M for the site in Table 2 is more than 100 times that reportedly experienced in Ogden Valley (0.005 g) from the March 18, 2020 M 5.7 Magna earthquake.

6.2 Surface Fault Rupture

Movement along faults at depth generates earthquakes. During earthquakes larger than Richter magnitude 6.5, ruptures along normal faults in the intermountain region generally propagate to the surface (Smith and Arabasz, 1991) as one side of the fault is uplifted and the other side down dropped. The resulting fault scarp has a near-vertical slope. The surface rupture may be expressed as a large singular rupture or several smaller ruptures in a broad zone. Ground displacement from surface fault rupture can cause significant damage or even collapse to structures located on an active fault.

No active faults are mapped crossing the site or were observed during our reconnaissance or on air photos. The Ogden Valley southwestern margin fault is mapped crossing the southwestern and western parts of the Project, but is concealed and shows no evidence of Holocene activity (Sullivan and others, 1988). The Utah Geological Survey Quaternary Fault and Fold Database for Utah (Black and others, 2003) indicates the nearest active fault to the Project is the Weber section of the Wasatch fault zone 3.9 miles to the west. Given all the above, we rate the existing risk from surface faulting as low. No additional investigation regarding surface faulting appears needed given the proposed development and current paleoseismic information.

6.3 Liquefaction and Lateral-Spread Ground Failure

Liquefaction occurs when saturated, loose, cohesionless, soils lose their support capabilities during a seismic event because of the development of excessive pore pressure. Earthquake-induced liquefaction can present a significant risk to structures from bearing-capacity failures to structural footings and foundations, and can damage structures and roadway embankments by triggering lateral spread landslides. Earthquakes of Richter magnitude 5 are generally regarded as the lower threshold for liquefaction. Liquefaction potential at the site is a combination of expected seismic accelerations (earthquake ground shaking), groundwater conditions, and presence of susceptible soils.

Given subsurface soil conditions observed in the test pits (Figures 3A-3Z and 4A-4H) and the site-specific geologic mapping on Plate 3, we rate the risk from liquefaction as low. Weber County GIS mapping shows the site is in an area of very low liquefaction potential (code 1).

6.4 Tectonic Deformation

Tectonic deformation refers to subsidence from warping, lowering, and tilting of a valley floor that accompanies surface-faulting earthquakes on normal faults. Large-scale tectonic subsidence may accompany earthquakes along large normal faults (Lund, 1990). Tectonic subsidence is believed to mainly impact those areas immediately adjacent to the downthrown side of active normal faults.

The Project is not in close proximity to and on the downthrown side of any mapped active (Holocene) faults. Based on this, we rate the risk from tectonic subsidence as low.

6.5 Seismic Seiche and Storm Surge

Earthquake-induced seiche presents a risk to structures within the wave-oscillation zone along the edges of large bodies of water, such as the Great Salt Lake. Given the elevation of the subject property and distance from large bodies of water, we rate the risk from seismic seiches as low.

6.6 Stream Flooding

Stream flooding may be caused by direct precipitation, melting snow, or a combination of both. In much of Utah, floods are most common in April through June during spring snowmelt. High flows may be sustained from a few days to several weeks, and the potential for flooding depends on a variety of factors such as surface hydrology, site grading and drainage, and runoff.

Federal Emergency Management Agency flood insurance rate mapping (Map Number 49057C0236F, effective on 06/02/2015; and 49057C0237F, effective 06/02/2015) classifies the Project in "Zone X" (areas of minimal flood hazards). However, two perennial drainages (Coal Hollow and Grover Hollow creeks) flow across the Project. Areas adjacent to these drainages may be subject to localized seasonal or flash flooding. Coal Hollow and Grover Hollow creeks are currently identified as drainages #4 and #5 on sheet DR1 in the June 22, 2021 Gardner Engineering preliminary plan set. The drainage plan overview shows a 50-foot setback around the creeks. Based on the FEMA mapping and current civil engineering design for the development, we rate the risk from stream flooding as low. Care should be taken that proper surface drainage is maintained.

6.7 Shallow Groundwater

Except for TP-11, no groundwater was encountered in the test pits at the site. However, several test pits exposed evidence for past possible perched shallow groundwater (as discussed in Section 5.1). Although no onsite groundwater information was found available, five water wells are near the eastern Project boundary (Figure 1). The drillers' logs for these wells report static groundwater depths of from 25 to 50 feet, with a mean depth of 36.6 feet and a median depth of 30 feet. We anticipate groundwater conditions at the Project to be similar, though depths may vary locally and seasonally from snowmelt runoff and annually from climatic fluctuations, which would be typical for an alpine environment. Our test pit data indicate perched conditions above less-permeable, clay-rich bedrock layers may also be locally present in the subsurface. Given all the above, we rate the risk from shallow groundwater as moderate. The Project geotechnical engineer should evaluate the need for a foundation drainage system to ensure that proper subsurface drainage is maintained.

6.8 Landslides and Slope Failures

Slope stability hazards such as landslides, slumps, and other mass movements can develop along moderate to steep slopes where a slope has been disturbed, the head of a slope loaded, or where increased groundwater pore pressures result in driving forces within the slope exceeding restraining forces. Slopes exhibiting prior failures, and also deposits from large landslides, are particularly vulnerable to instability and reactivation.

The Project is in an area underlain mainly by Tertiary-age Norwood Formation bedrock with a veneer of mass wasting colluvium from various pre- and post-Lake Bonneville landslides. Much of the site is typified by eroded landslide deposits overlying and encircling various weathered bedrock knobs and ridges. The landslide morphology appeared subdued and no evidence for recent or ongoing landslides or slope instability was

observed. Colluvial thicknesses are shown on the test pit logs (Figures 3A-3Z and 4A-4H) and were generally less than 10 feet, except in TP-5, TP-9 and TP-29. Mixed alluvium and colluvium was also encountered in test pits TP-37 and TP-50 that extended below the depth of excavation. Four Holocene-age landslide deposits are also present in the southwest and north parts of the Project (unit Qmsy, Plates 1 and 3). Test pits TP-29 and TP-30 in one of these landslides showed evidence for multiple depositional events. Plate 2 shows slopes at the site vary in aspect and steepness, though much of the site appears to be on gentle slopes with a steepness less than 20 percent (unshaded). The young landslides originated in slopes exceeding 20 percent steepness.

Given the above, we rate the risk from landslides and slope instability as high. We recommend that slope stability be evaluated by the Project geotechnical engineer based on site-specific soil conditions and the data provided in this report. Recommendations should be provided to reduce the landslide hazard risk if factors of safety are determined to be unsuitable. We further recommend that: (1) no structures be constructed on a slope that shows an average gradient greater than 30 percent over a 50-foot span; (2) no structures be constructed on the young landslides (unit Qmsy) on Plates 1-3; and (3) a site-specific geologic and geotechnical assessment be conducted for structures that will be located on a slope that shows an average gradient greater than 20 percent over a 50-foot span. Water, steep man-made cuts, and non-engineered fill materials are often major contributors to slope instability. Care should be taken to maintain proper site drainage, that site grading does not destabilize slopes at the site without prior geotechnical analysis and grading plans, and that water from man-made sources is minimized in potentially unstable slope areas.

6.9 Debris Flows

Debris flow hazards are typically associated with unconsolidated alluvial fan deposits at the mouths of large range-front drainages, such as those along the Wasatch Front. Debris flows have historically caused significant damage in the Wasatch Front area.

Coal Hollow and Grover Hollow creeks flow across the Project. No onsite alluvial fans are mapped associated with these drainages, but several areas of mixed alluvial and colluvial deposits are mapped along the creeks that may be from seasonal floods (unit Qac, Plates 1-3) and test pit TP-50 near Coal Hollow creek (Plate 1) exposed mixed alluvium and colluvium that extended below the depth of excavation. We anticipate that these creeks are mainly transport and erosion zones for small debris flow and floods, with deposition locally along the creek and in the offsite alluvial fans (unit Qafy, Plates 1-3) downslope further east. Given that areas near the creeks are also in a 50-foot stream setback zone, the hazard from debris transport and erosion appears minimal. Given this, we rate the risk from debris flows and floods as low.

6.10 Rock Fall

No significant bedrock outcrops are at the site or in adjacent higher slopes that could present a source area for rock fall clasts, and no boulders likely from rock falls were observed at the site. Based on the above, we rate the hazard from rock falls as low.

6.11 Problem Soil and Rock

Clay-rich surficial soils and weathered bedrock possibly susceptible to a high degree of shrinking/swelling were observed in numerous test pits at the Project. Given the above, we rate the risk from problem soil and rock as high. Soil conditions and specific recommendations for site grading, subgrade preparation, and footing and foundation design should be provided in the Project geotechnical engineering evaluation.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Earthquake ground shaking, landslides and slope stability, and problem soil and rock are identified as posing a high relative risk to the Project. Shallow groundwater also poses a moderate (equivocal) risk. The following recommendations are provided with regard to the geologic characterizations in this report:

- ***Seismic Design*** – All habitable structures developed at the property should be constructed to current adopted seismic building codes to reduce the risk of damage, injury, or loss of life from earthquake ground shaking. The Project geotechnical engineer should confirm the ground shaking hazard and provide appropriate seismic design parameters as needed. Earthquake ground shaking is a hazard that is common for all development along the Wasatch Front.

- ***Geotechnical Evaluation*** – A design-level geotechnical engineering study should be conducted prior to construction to assess soil foundation conditions, provide recommendations regarding subsurface drainage, and evaluate slope stability. The stability evaluation should be based on geologic characterizations in this report and site-specific geotechnical data, and provide recommendations for reducing the risk of landsliding if the factors of safety are deemed unsuitable.

- ***Non-buildable Areas and Additional Investigations*** – No structures should be constructed on a slope that shows an average gradient greater than 30 percent over a 50-foot span, or on the young landslides (unit Qmsy) on Plates 1-3. A site-specific geologic and geotechnical assessment should be conducted if any structure will be located on a slope that shows an average gradient greater than 20 percent over a 50-foot span.

- ***Site Modifications and Drainage*** – No unplanned cuts should be made in the slopes at the site without prior geotechnical analyses, and proper surface and subsurface drainage should be maintained. We recommend that final site drainage and grading plans be reviewed by a licensed geologist and geotechnical engineer.

- ***Excavation Backfill Considerations*** – The test pits may be in areas where a structure could subsequently be placed. However, backfill may not have been replaced in the excavations in compacted layers. The fill could settle with time and upon saturation. Should structures be located in an excavated area, no footings or structure should be founded over the excavation unless the backfill has been removed and replaced with structural fill.

- ***Hazard Disclosures and Report Availability*** – All hazards identified as posing a high risk at the site should be disclosed to future buyers so that they may understand and be willing to accept any potential developmental challenges and/or risks posed by these hazards. This report should be made available to architects, building contractors, and in the event of a future property sale, real estate agents and potential buyers. The report should be referenced for information on technical data only as interpreted from

observations and not as a warranty of conditions throughout the site. The report should be submitted in its entirety, or referenced appropriately, as part of any document submittal to a government agency responsible for planning decisions or geologic review. Incomplete submittals void the professional seals and signatures we provide herein. Although this report and the data herein are the property of the client, the report format is the intellectual property of Western Geologic and should not be copied, used, or modified without express permission of the authors.

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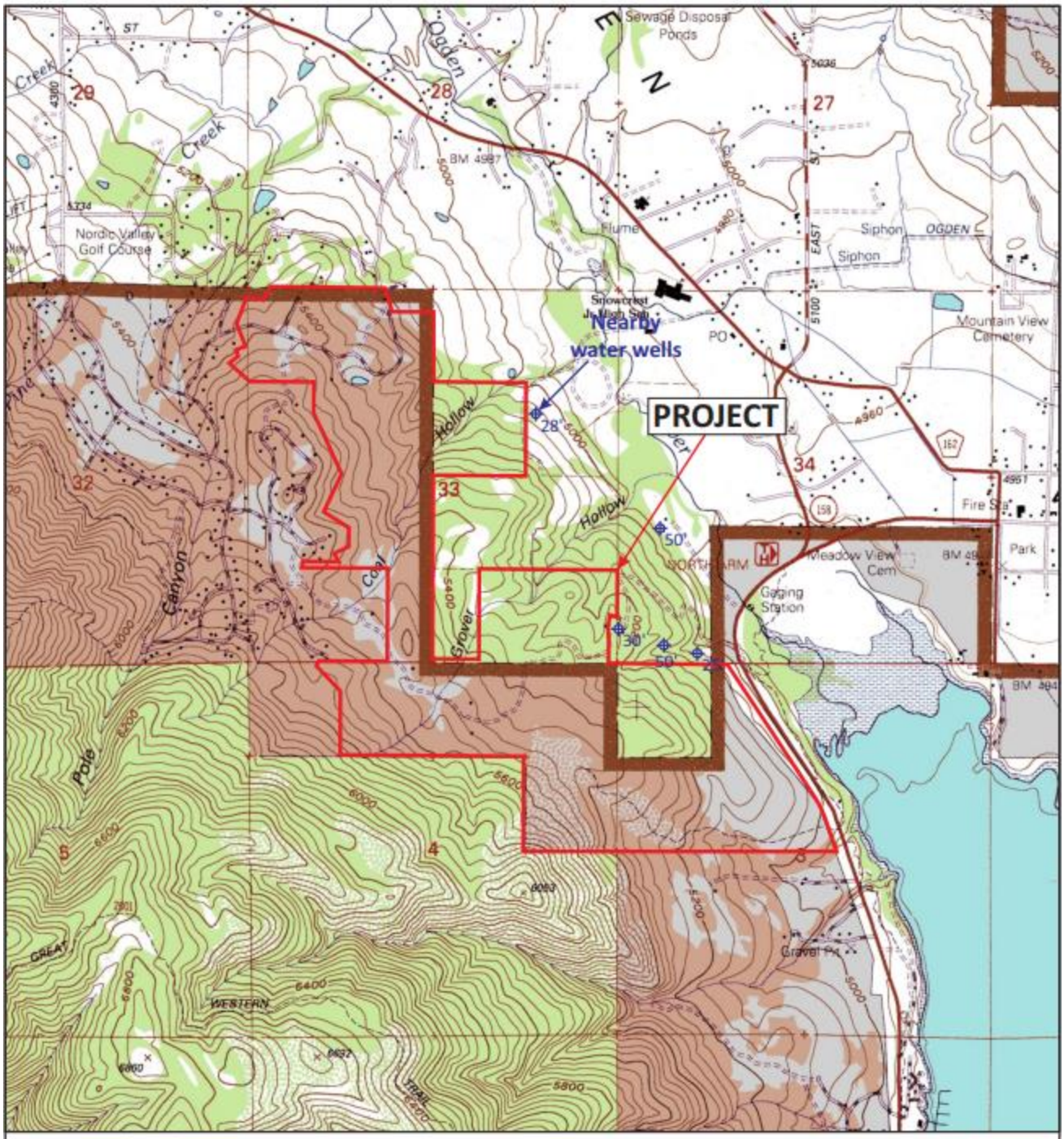
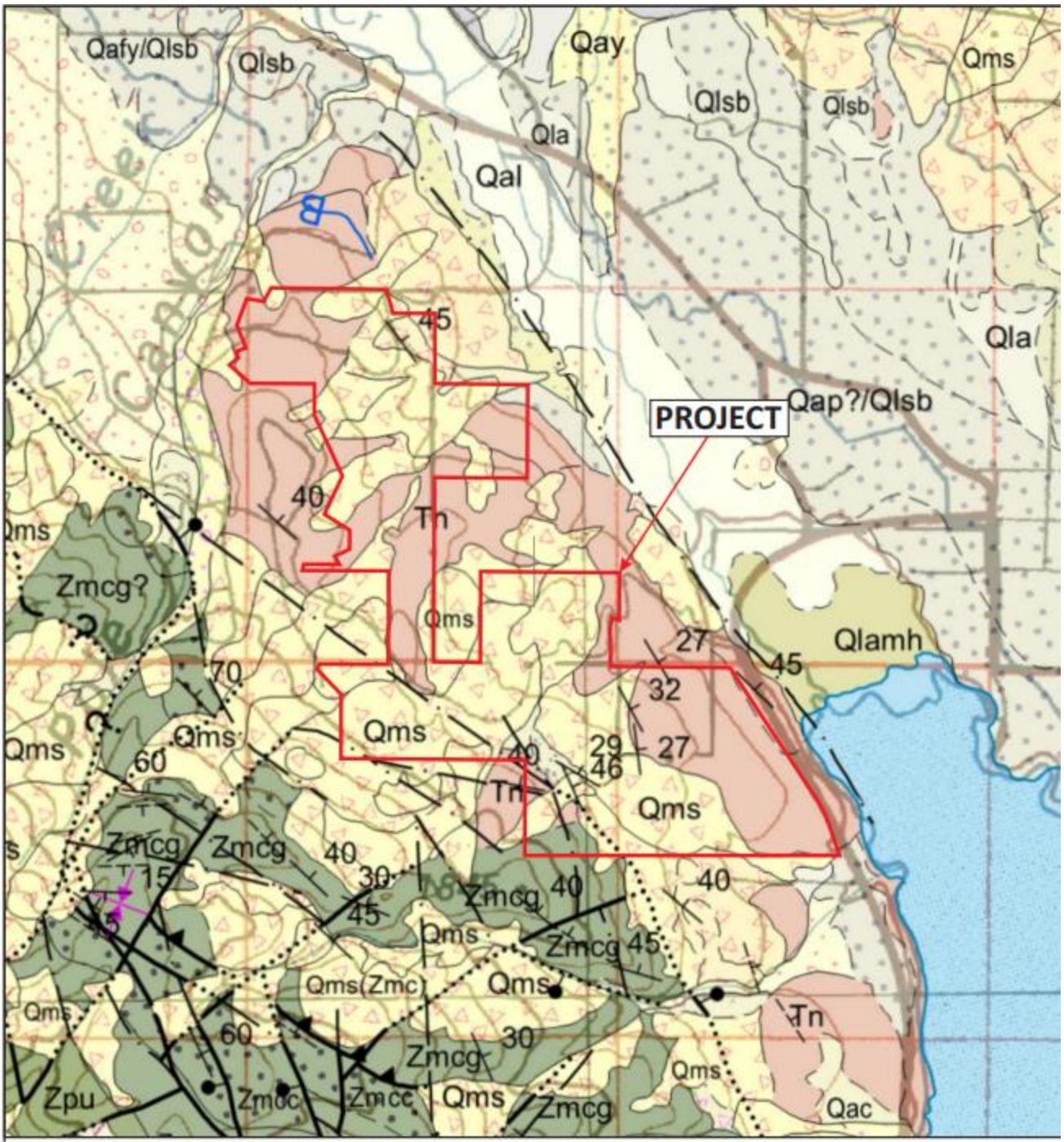


Source: U.S. Geological Survey 7.5 Minute Series Topographic Maps, Utah - Huntsville, 1998; Project location Sections 3, 4, 32 and 33, Township 7 North, Range 1 East (SLBM).

N

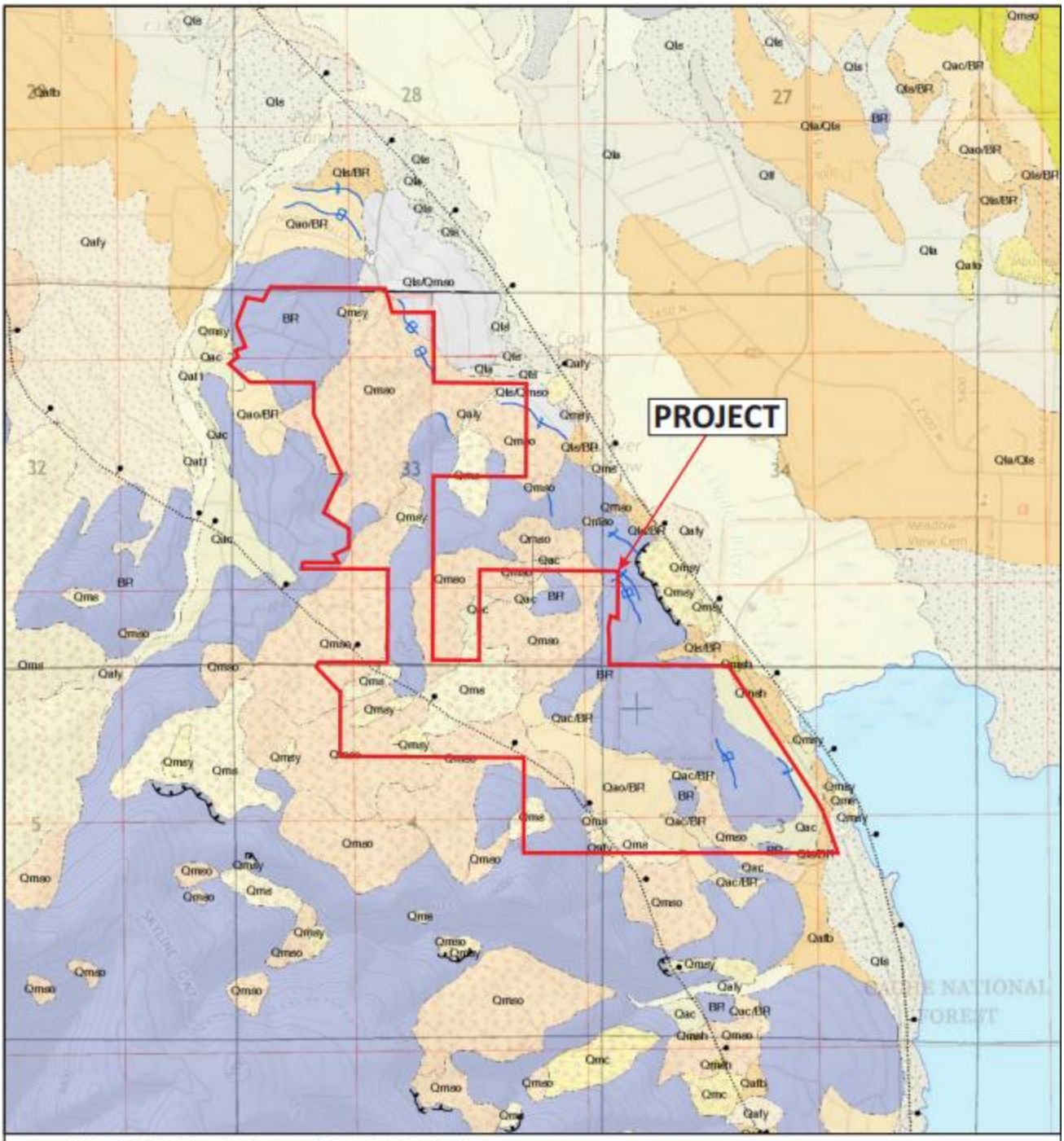
LOCATION MAP

GEOLOGIC HAZARDS EVALUATION



Source: Coogan and King (2016), original map scale 1:100,000. See text for explanation of nearby surficial geologic units.

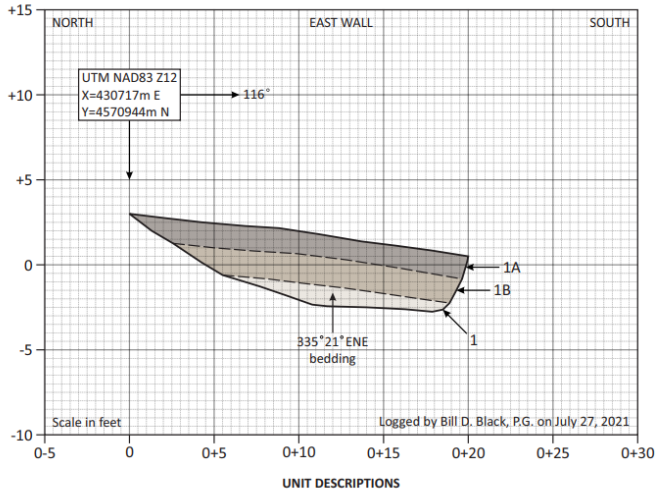
REGIONAL GEOLOGIC MAP



Source: McDonald (2020), original map scale 1:24,000. See text for explanation of onsite surficial geologic units.

SURFICIAL GEOLOGIC MAP

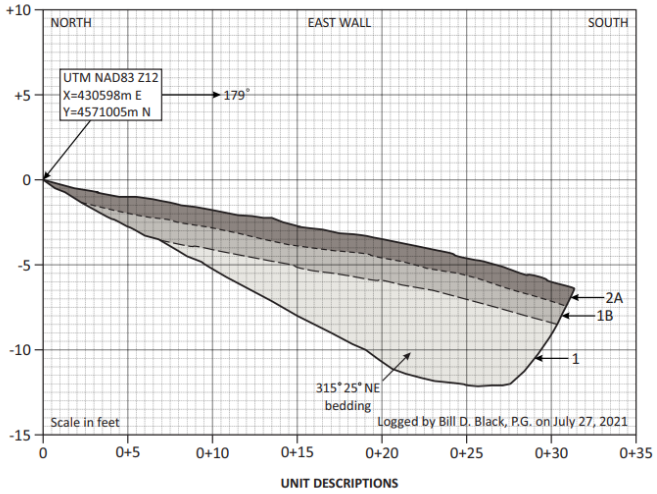
TEST PIT 1



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, yellowish-brown and brown; strong to very strong; well bedded; weathered tuffaceous sandstone; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 2

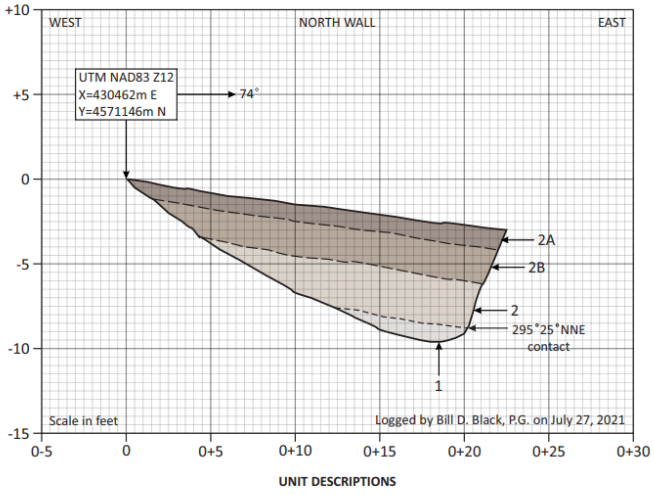


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brown to white, strong to very strong, well bedded, weathered tuffaceous sandstone grading upward to light olive-brown, poorly bedded siltstone; B horizon formed in unit (1B).

Unit 2. *Holocene mass wasting colluvium* - dark grayish-brown, medium dense to medium firm, massive, clayey sand to sandy clay (SC/CL) with gravel and cobbles; clasts subangular with stage II carbonate; soil A horizon formed in unit (2A); thickness about 1 feet.

TEST PIT 3

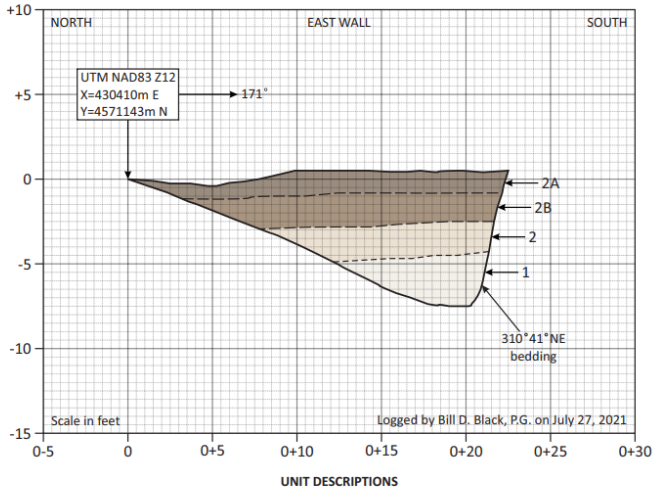


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange to olive-brown, strong, massive, weathered tuffaceous conglomerate.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark brown, dense to stiff, massive, clayey gravel to gravelly clay (GC/CL) with sand and trace cobbles; A and B horizons formed in unit (2A and 2B); about 6 feet thick.

TEST PIT 4

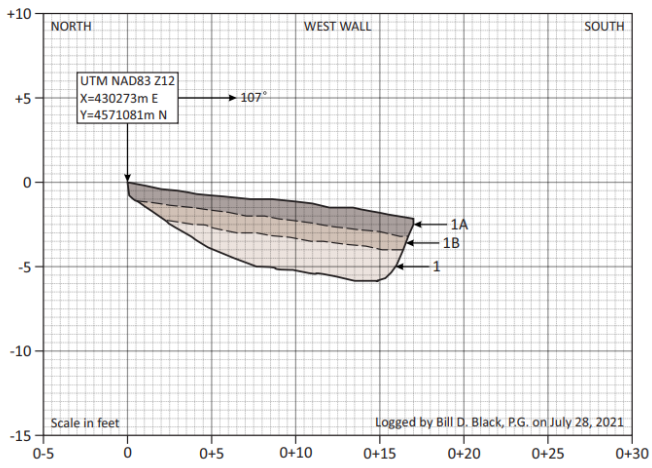


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brown to white, strong, well bedded, weathered siltstone.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, dense to stiff, massive, clayey gravel to gravelly clay (GC/CL) with cobbles along basal contact and near-surface cobbles and small boulders; clasts subangular with stage II carbonate; slight iron oxide staining along basal contact; A and B soil horizons formed in unit (2A and 2B); about 5 feet thick.

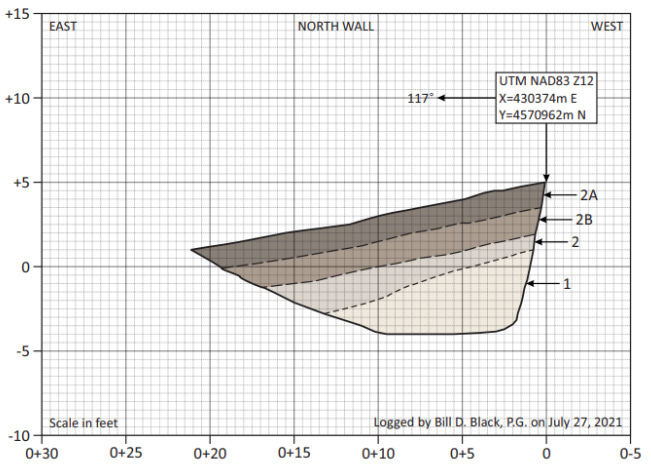
TEST PIT 5



UNIT DESCRIPTIONS

Unit 1. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, dense/stiff to very dense/stiff, massive, clayey gravel to gravelly clay (GC/CL); A and B soil horizons formed in unit (1A and 1B); thickness > 4 feet; refusal at test pit floor.

TEST PIT 6

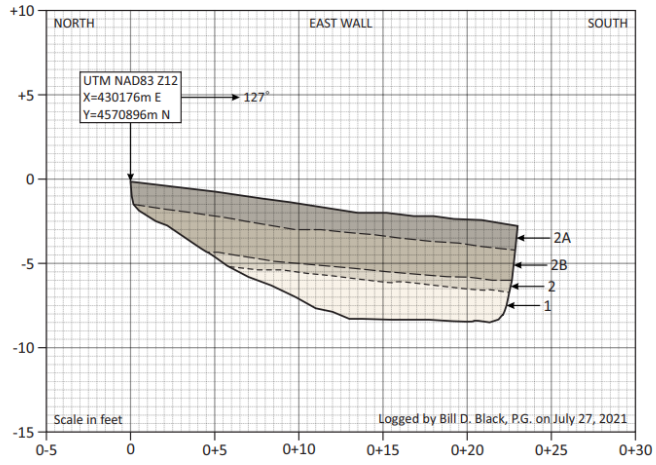


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - grayish-brown to orange-brown, strong, massive, weathered tuffaceous conglomerate with round to subround cobbles.

Unit 2. *Late Pleistocene mass wasting colluvium* - olive-brown to dark grayish-brown, stiff to dense, massive, clay with gravel (CL) in basal part grading upward to clayey gravel (GC) with sand, cobbles and rare small boulders; clasts subangular to subround with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 4 to 5 feet thick.

TEST PIT 7

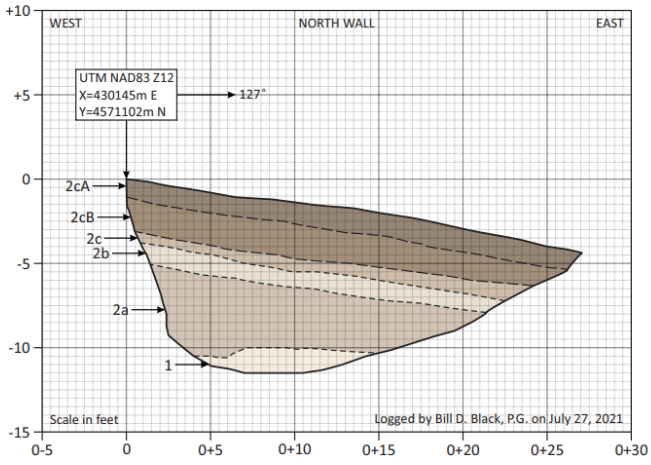


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brownish-olive, orange-brown and light brown; strong; poorly bedded; weathered claystone in upper part overlying weathered tuffaceous conglomerate with subangular to subround cobbles.

Unit 2. *Late Pleistocene mass wasting colluvium* - brownish-olive to dark grayish-brown, stiff, massive, lean clay (CL) with sand; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

TEST PIT 8

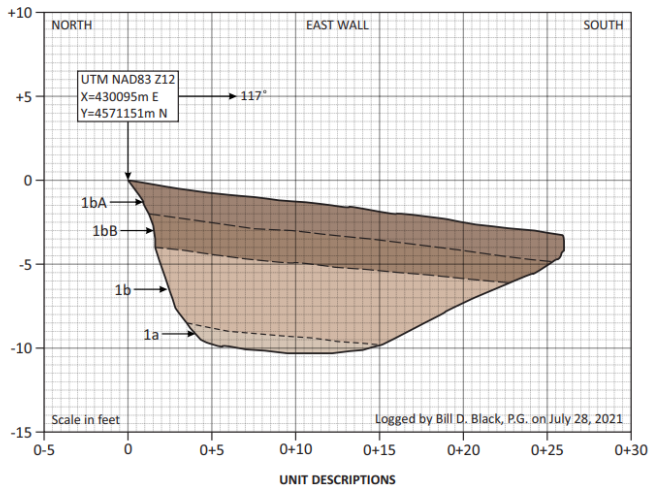


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light orange-brown, strong, massive, weathered tuffaceous conglomerate.

Unit 2. *Late Pleistocene mass wasting colluvium* - sequence of brown, brownish-gray, olive-brown and reddish-brown, stiff to dense, massive colluvium comprised of a lower (2a) lean clay (CL) with gravel; a middle (2b) gravelly clay to clayey gravel (CL/GC) with subangular cobbles; and an upper (2c) sandy clay (CL) with gravel and trace cobbles; A and B soil horizons formed in upper unit (2cA and 2cB); overall about 8.5 to 10 feet thick.

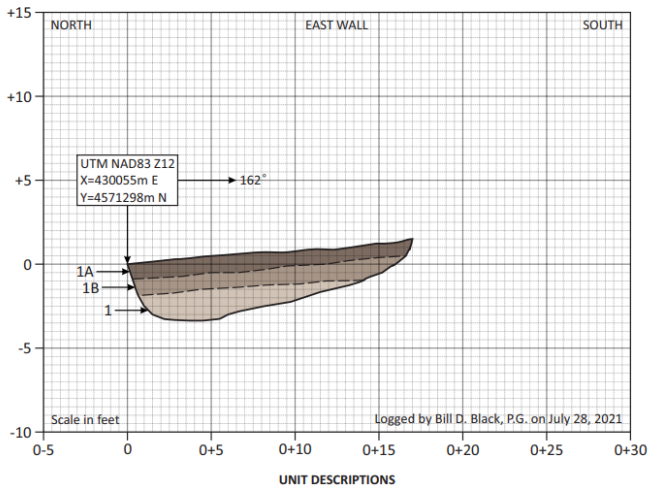
TEST PIT 9



UNIT DESCRIPTIONS

Unit 1. *Late Pleistocene mass wasting colluvium* - sequence comprised of a lower (1a) orange-brown, dense to stiff, massive, clayey gravel to gravelly clay (GC/CL); and an upper (1b) brown to dark grayish-brown, stiff, massive, clay (CL) with sand and gravel; A and B soil horizons formed in unit (1bA and 1bB); thickness > 9 feet.

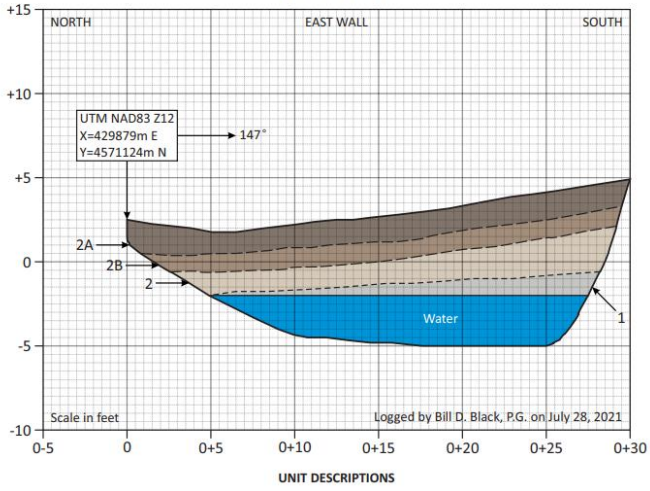
TEST PIT 10



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown to dark grayish-brown, strong, massive, weathered tuffaceous conglomerate; A and B soil horizons formed in unit (1A and 1B); refusal at test pit floor.

TEST PIT 11

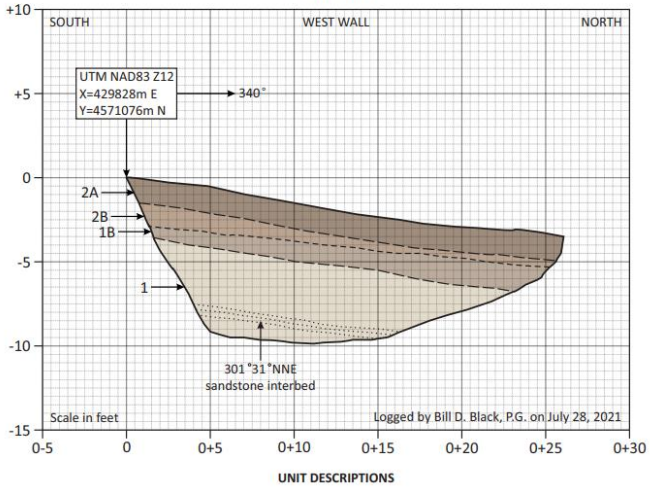


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - grayish-olive, dense, poorly bedded, strong, weathered tuffaceous sandstone; strike and dip not measured due to water.

Unit 2. *Late Pleistocene mass wasting colluvium* - orange-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 4 to 5 feet thick.

TEST PIT 12

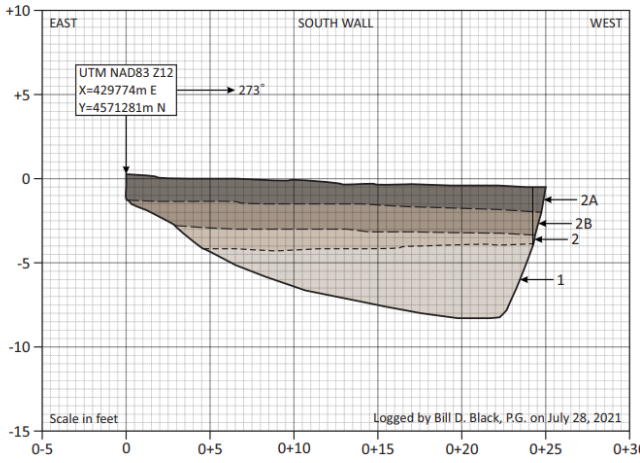


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, strong, poorly to well bedded, weathered claystone with iron oxide staining along bedding and sandstone interbeds up to 12 inches thick; B horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - orange-brown to dark grayish-brown, dense, massive, clayey gravel (GC) with basal subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 2 to 3 feet thick.

TEST PIT 13

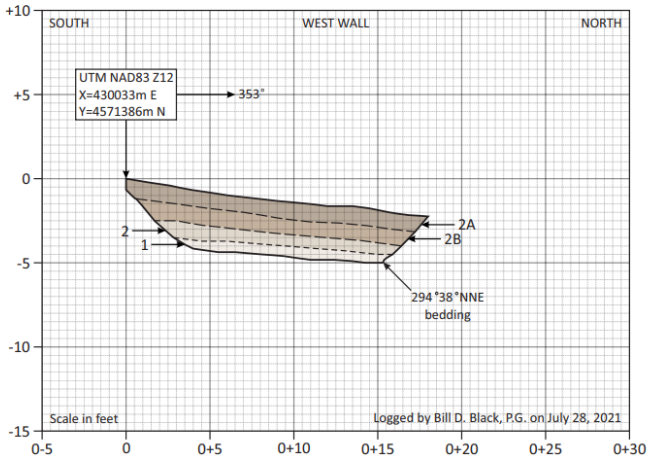


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light orange-brown to light grayish-brown, moderately strong, weathered tuffaceous conglomerate; clasts subangular with stage II carbonate, carbonate stringers in lower part of unit.

Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and near-surface subangular to subround cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 3.5 to 4 feet thick.

TEST PIT 14

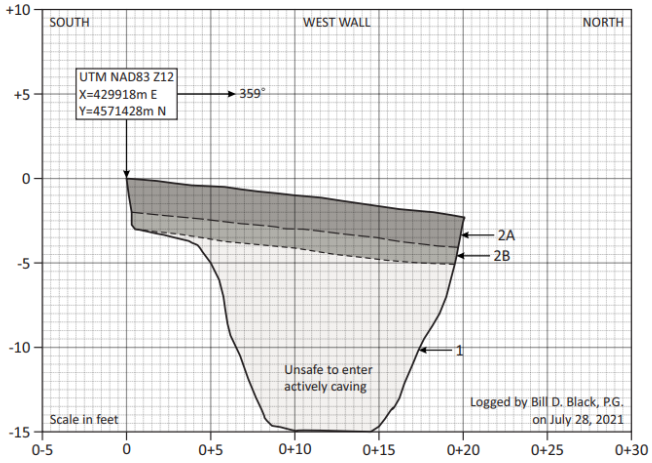


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brownish-olive, strong to very strong, well bedded, laminated, weathered tuffaceous sandstone.

Unit 2. *Late Pleistocene mass wasting colluvium* - reddish-brown to dark grayish-brown, dense, massive, clayey gravel (GC) with sand and cobbles; clasts subangular to subround with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

TEST PIT 15

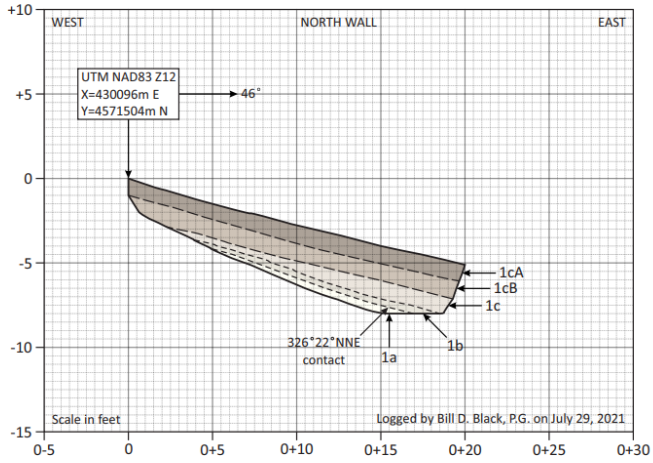


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation?* - light olive-brown to light grayish-olive, weak, highly fractured and weathered, poorly bedded, weathered claystone with brown banding.

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown to dark brownish-olive, stiff, massive, clay (CL) with sand, trace gravel and rare subangular to subround cobbles; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

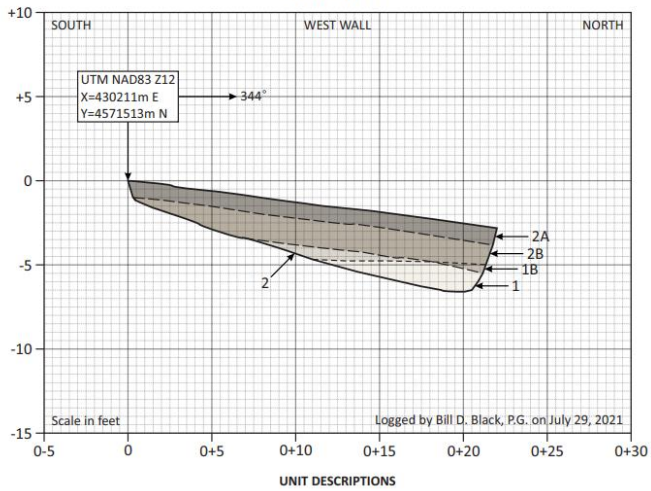
TEST PIT 16



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of interbedded, olive-brown to light brown, strong, well bedded, weathered bedrock comprised of a lower (1a) claystone, a middle (1b) tuffaceous sandstone, and an upper (1c) siltstone to claystone; A and B soil horizons formed in upper unit (1cA and 1cB).

TEST PIT 17

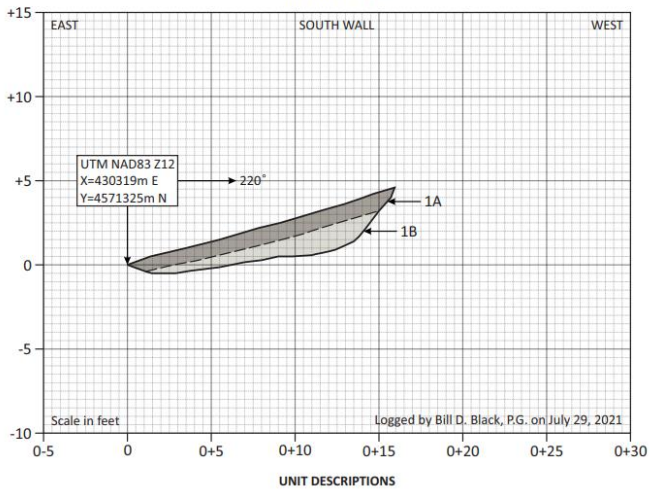


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, strong, massive, weathered claystone; B soil horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - olive-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand; A and B soil horizons formed in unit (2A and 2B); about 2.5 to 3.5 feet thick.

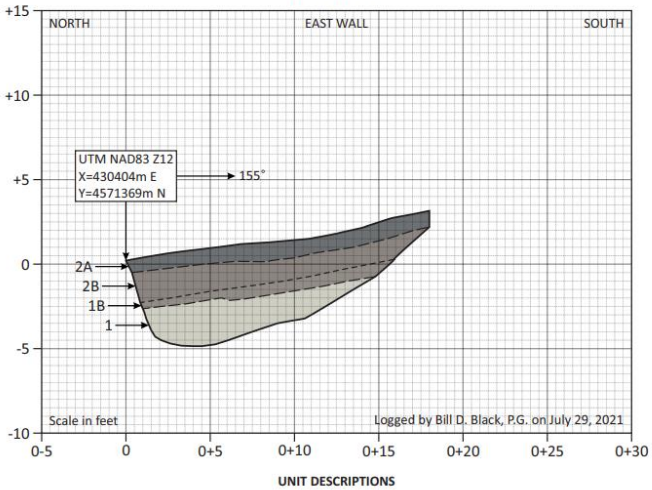
TEST PIT 18



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brownish-white, very strong, well bedded, tuffaceous sandstone; refusal at test pit floor; exposure too shallow to observe base of B horizon or measure strike/dip; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 19

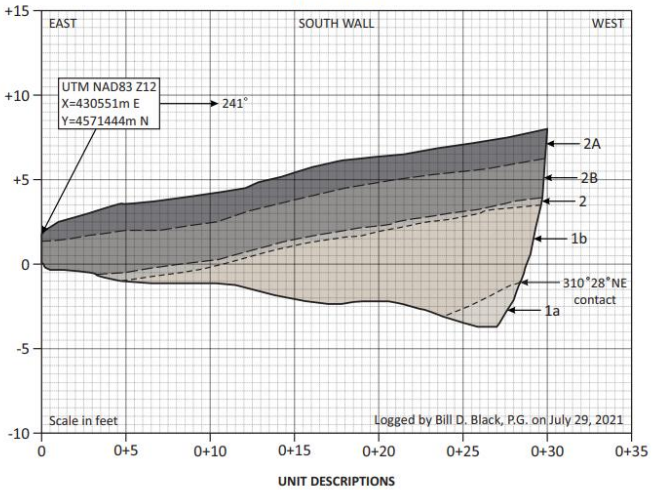


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, strong, massive, weathered claystone; B soil horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - olive-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

TEST PIT 20

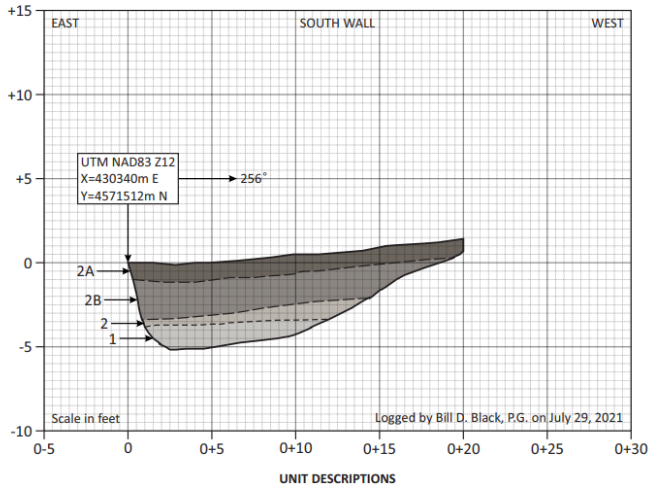


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of weathered bedrock comprised of a lower (1a) light grayish-olive, moderately strong, poorly bedded, siltstone to tuffaceous sandstone with carbonate; and an upper (1b) brownish-olive, strong, poorly bedded, claystone to tuffaceous conglomerate.

Unit 2. *Late Pleistocene to Holocene mixed alluvium and colluvium* - dark brown to dark grayish-brown, massive, stiff, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

TEST PIT 21

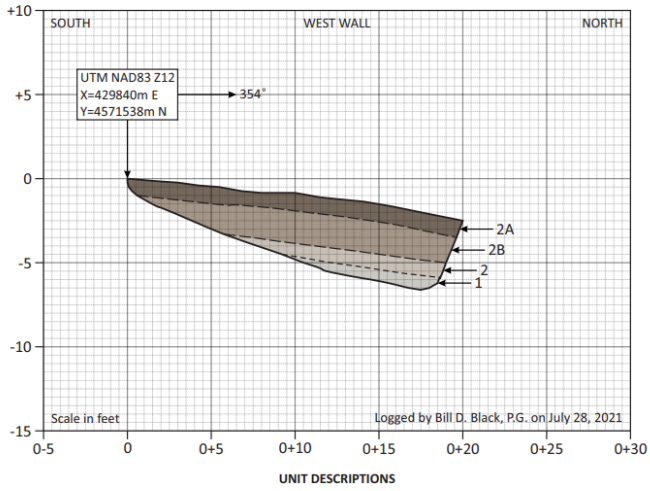


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, strong, massive, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - olive-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

TEST PIT 22

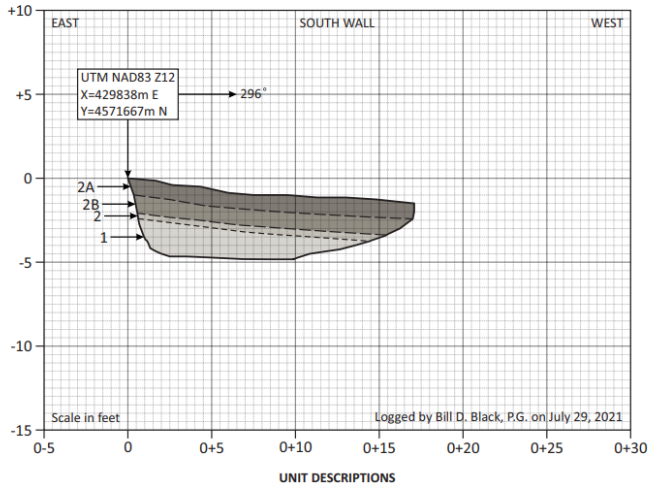


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown to light grayish-olive, moderately strong, poorly bedded, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, stiff, massive, clay (CL) with sand and subangular to subround cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

TEST PIT 23

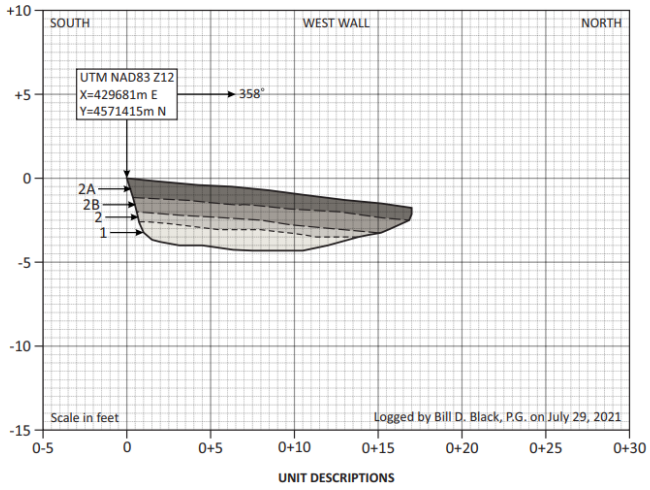


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light grayish-brown, moderately strong, poorly bedded, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown, medium stiff, massive, lean clay (CL) with trace sand; A and B soil horizons formed in unit (2A and 2B); about 2 feet thick.

TEST PIT 24

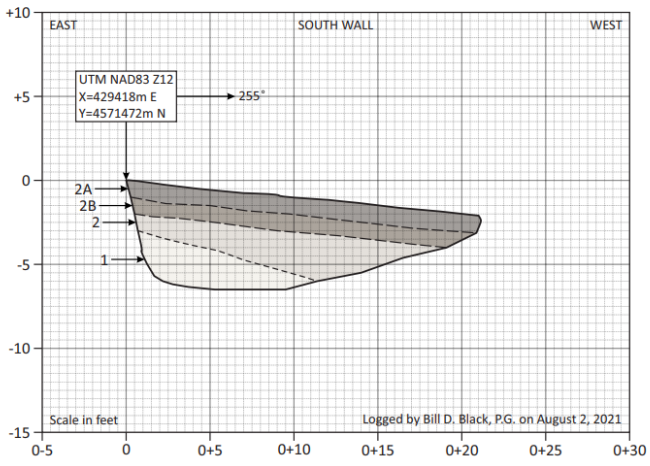


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light grayish-brown, moderately strong, poorly bedded, weathered claystone.

Unit 2. *Late Pleistocene to Holocene mixed alluvium and colluvium* - dark grayish-brown, medium stiff, massive, lean clay (CL) with trace sand; A and B soil horizons formed in unit (2A and 2B); about 2 to 3 feet thick.

TEST PIT 25

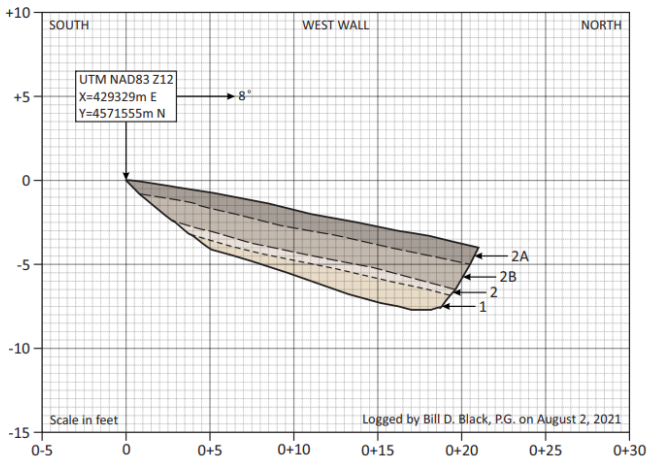


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light grayish-olive-brown, strong, poorly bedded, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and trace gravel; A and B soil horizons formed in unit (2A and 2B); about 3 to 5 feet thick.

TEST PIT 26

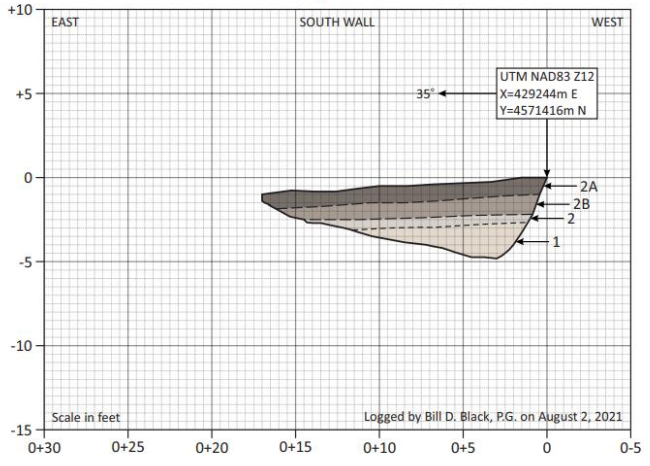


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown, strong, massive, weathered pebble conglomerate.

Unit 2. *Late Pleistocene mass wasting colluvium* - light brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

TEST PIT 27

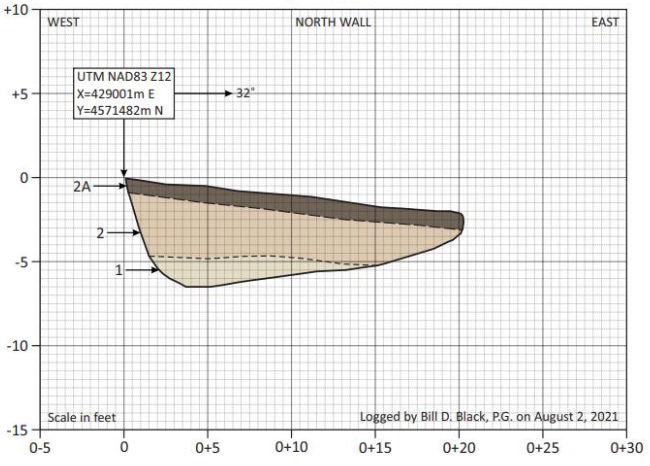


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - olive-brown, strong, poorly bedded, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand, gravel; and rare small subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 2.5 feet thick.

TEST PIT 28

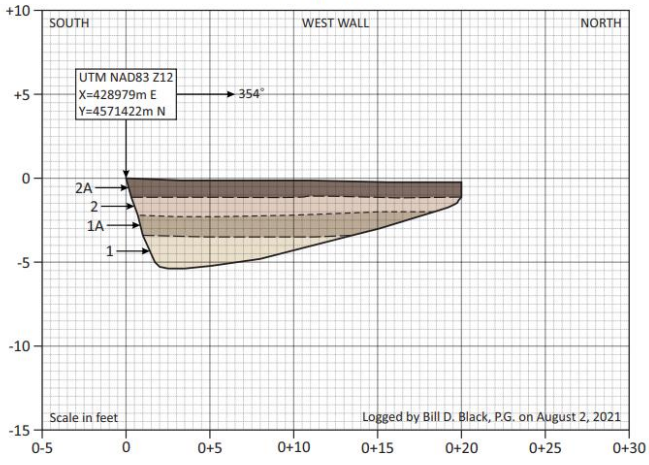


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brown to olive-brown, strong, poorly bedded, weathered tuffaceous conglomerate with carbonate.

Unit 2. *Holocene mass wasting colluvium* - brown to dark grayish-brown, medium dense, massive, clayey gravel (GC) with sand and subangular to subround cobbles with stage II carbonate; A soil horizon formed in unit (2A); about 3.5 to 4.5 feet thick.

TEST PIT 29

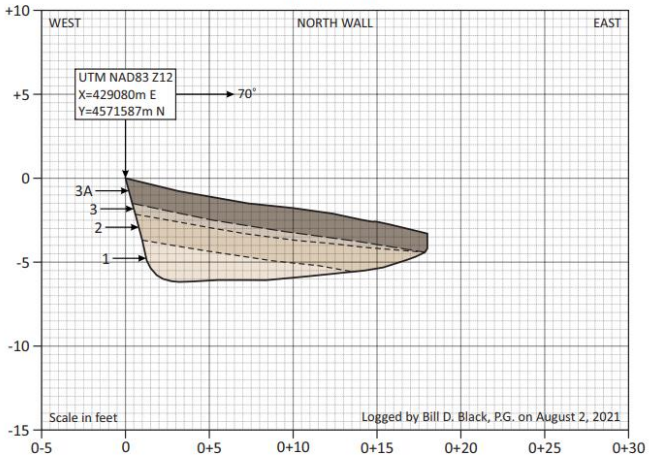


UNIT DESCRIPTIONS

Unit 1. *Holocene mass wasting colluvium* - grayish-brown to orange-brown, medium dense to dense, poorly bedded to massive, clayey gravel (GC) with sand, subround to angular cobbles with stage II carbonate and discontinuous organic-rich lamina; paleosol A horizon formed in unit (1A); thickness > 3 feet.

Unit 2. *Holocene mass wasting colluvium* - grayish-brown to dark grayish-brown, medium dense to dense, massive, clayey gravel (GC) with sand; A soil horizon formed in unit (2A); about 2 feet thick.

TEST PIT 30



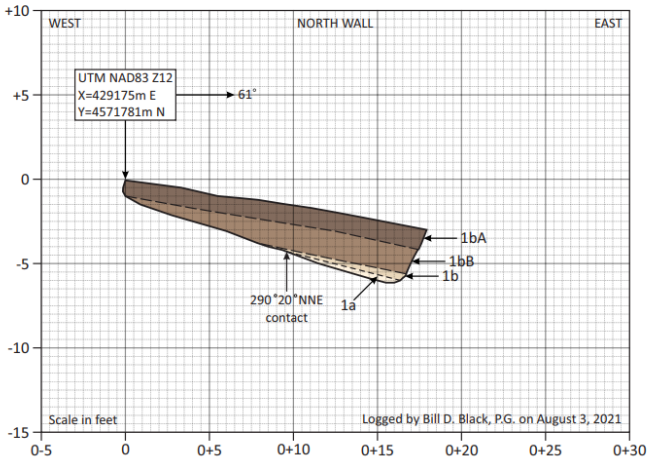
UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brown, strong, poorly bedded, weathered claystone with orange-brown lamina.

Unit 2. *Holocene mass wasting colluvium* - brown, medium dense, massive, clayey gravel (GC) with sand and angular cobbles with stage II carbonate; clasts slightly imbrecated; about 1.5 feet thick.

Unit 3. *Holocene mass wasting colluvium* - dark grayish-brown, dense to medium dense, massive, clayey gravel (GC); A soil horizon formed in unit (3A); about 2 feet thick.

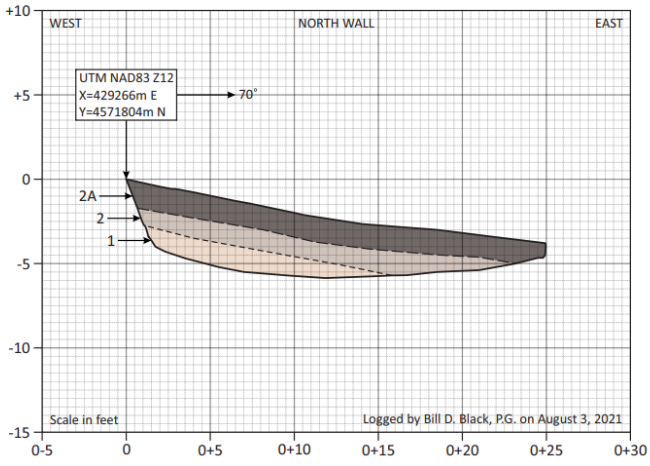
TEST PIT 31



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence comprised of a lower (1a) light brown, strong to very strong, poorly bedded, weathered tuffaceous sandstone; and an upper (1b) light orange-brown to dark grayish-brown, moderately strong, poorly bedded to massive, weathered tuffaceous conglomerate; A and B soil horizons formed in unit (1bA and 1bB).

TEST PIT 32

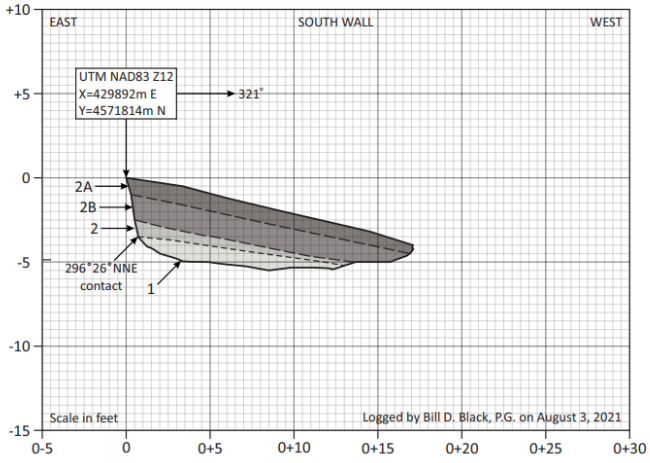


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange to grayish-brown, strong, poorly bedded, weathered tuffaceous conglomerate.

Unit 2. *Late Pleistocene? mass wasting colluvium* - brown to dark grayish-brown, medium dense, massive, clayey gravel (GC) with sand; A soil horizon formed in unit (2A), B horizon indistinct; about 2.5 feet thick.

TEST PIT 33

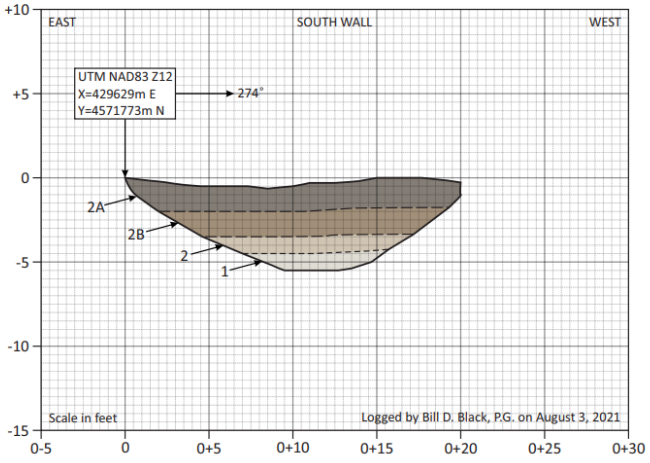


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brownish-gray, strong, well bedded weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - grayish-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand, gravel and trace subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

TEST PIT 34

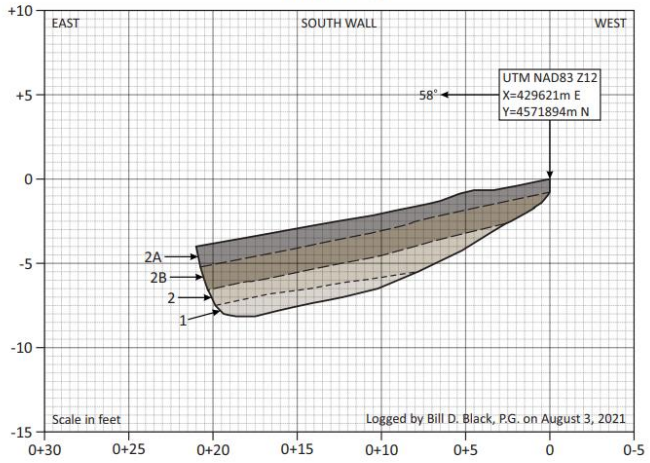


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brown to light brown, strong, massive, weathered tuffaceous conglomerate.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, stiff to medium stiff, sandy to gravelly clay (CL) with trace cobbles; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

TEST PIT 35

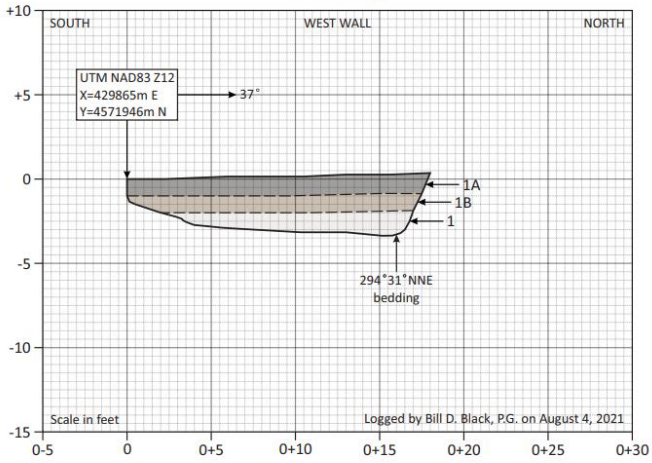


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brown to light brown, strong, massive, weathered tuffaceous conglomerate.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, stiff to medium stiff, sandy to gravelly clay (CL) with trace cobbles; A and B soil horizons formed in unit (2A and 2B); about 4 feet thick.

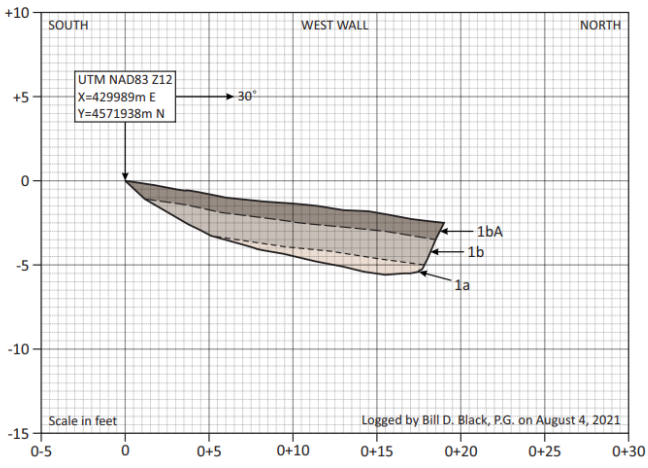
TEST PIT 36



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light gray, strong to very strong, poorly bedded, weathered tuffaceous sandstone with iron-oxide staining along fractures; A and B soil horizons formed in unit (1A and 1B); refusal at test pit floor.

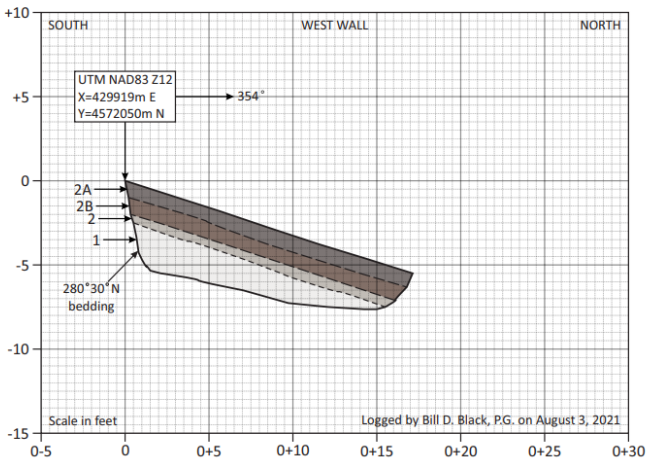
TEST PIT 37



UNIT DESCRIPTIONS

Unit 1. *Holocene mixed alluvium and colluvium* - sequence comprised of a lower (1a) matrix-supported, olive to orange-olive, dense, massive, clayey gravel (GC) with sand; and an upper (1b) clast-supported, dense, brown to dark brown, massive, gravel with clay (GW), sand, and subangular to subround cobbles and boulders with no carbonate; A soil horizon formed in upper unit (1bA); thickness > 3.5 feet.

TEST PIT 38

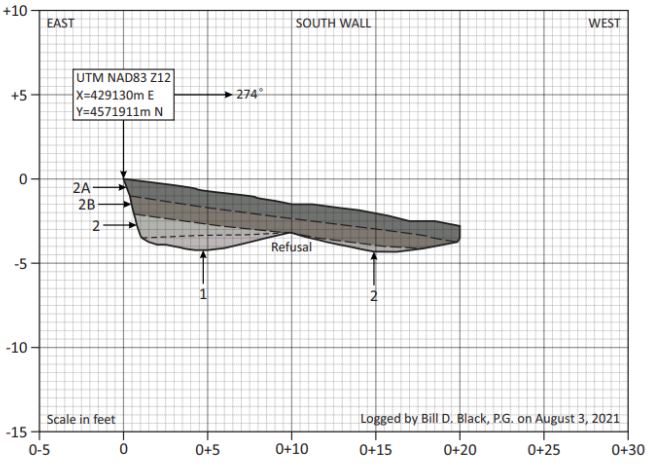


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light grayish-olive, strong to very strong, well bedded, weathered tuffaceous sandstone.

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown, stiff, massive, lean clay (CL) with sand and trace gravel; A and B soil horizons formed in unit (2A and 2B); about 2.5 feet thick.

TEST PIT 39

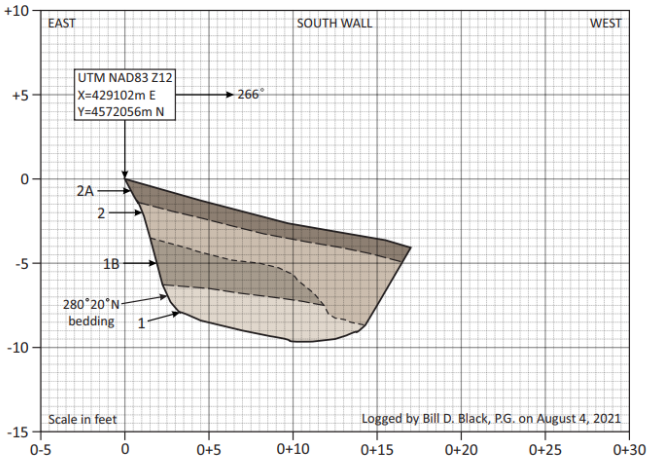


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation*- light gray to light brown, very strong, poorly bedded, weathered tuffaceous sandstone.

Unit 2. *Late Pleistocene tmass wasting colluvium* - reddish-brown to dark brown, massive, dense to medium dense, clayey gravel (GC) with sand and trace subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 1.5 to 3 feet thick.

TEST PIT 40

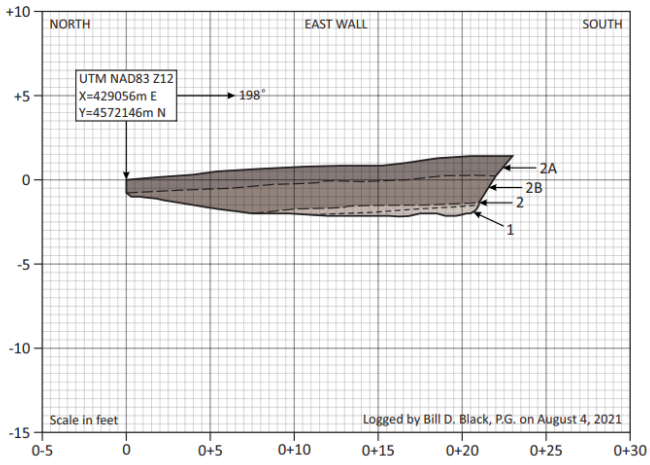


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brown to grayish-brown, strong to medium strong, poorly bedded, weathered tuffaceous conglomerate with subangular to subround clasts with stage II carbonate; B soil horizon formed in unit (1B) but truncated by unit 2.

Unit 2. *Holocene mixed alluvium and colluvium?* - brown to dark grayish-brown, massive, medium dense, lean clay (CL) with sand and gravel; slightly vesicular; A soil horizon formed in unit (2A); about 3 to 5.5 feet thick.

TEST PIT 41

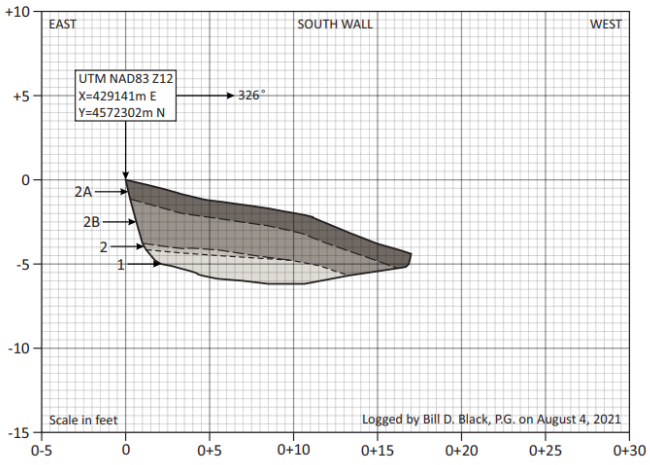


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown, strong to very strong, massive to poorly bedded, weathered claystone; weak bedding dips to north.

Unit 2. *Late Pleistocene mass wasting colluvium* - grayish-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and gravel; slightly vesicular; A and B soil horizons formed in unit (2A and 2B); about 3 feet thick.

TEST PIT 42

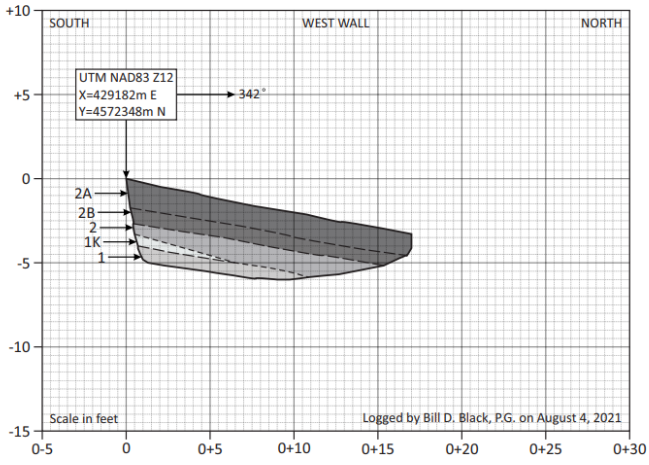


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light olive-brown, strong, massive, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, medium stiff, massive, sandy lean clay (CL) with gravel; contains blocks of unit 1 and discontinuous organic-enriched lamina and blocks; A and B soil horizons formed in unit (2A and 2B); 3 to 3.5 feet thick.

TEST PIT 43

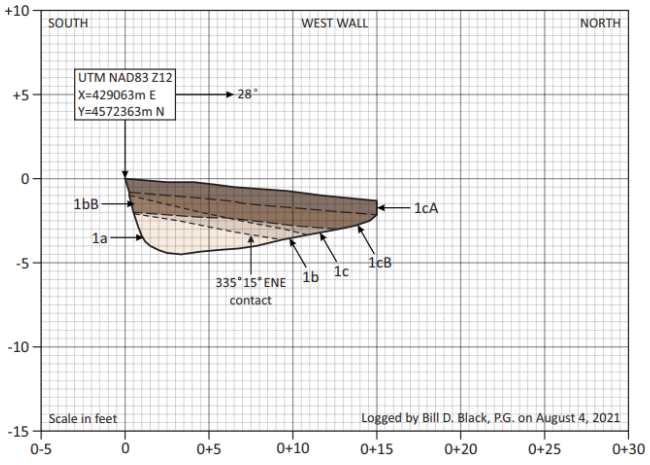


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown, strong, poorly bedded, weathered tuffaceous conglomerate with topset carbonate and subangular to subround clasts; weak K soil horizon formed in unit (1K).

Unit 2. *Late Pleistocene tmass wasting colluvium* - dark grayish-brown, medium dense/stiff to dense/stiff; clayey sand to sandy clay (SC/CL) with gravel and subround cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 3.5 feet thick.

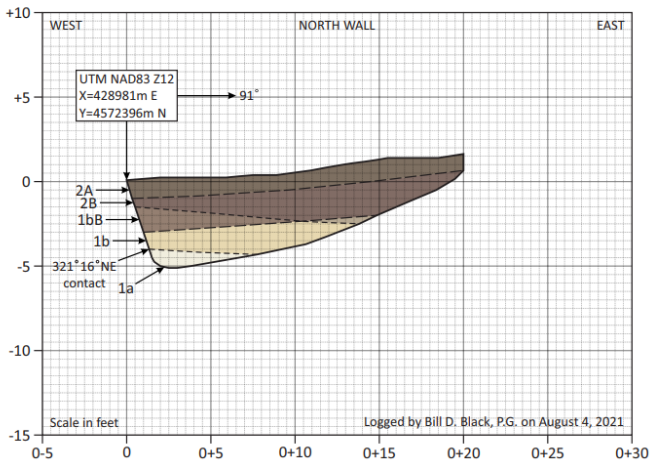
TEST PIT 44



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of weathered bedrock comprised of a lower (1a) light brown, strong, poorly bedded to massive, siltstone; a middle (1b) brownish-olive, strong, poorly bedded to massive, claystone; and an upper (1c) tuffaceous conglomerate; A and B soil horizons formed in unit (1bB, 1cB and 1cA).

TEST PIT 45

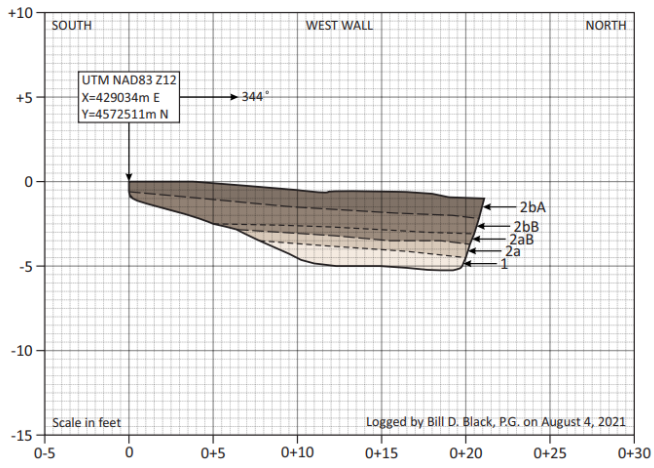


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of strong, weathered bedrock comprised of a lower (1a) olive-brown to light olive, thinly bedded siltstone to claystone; and an upper (1b) brownish-olive claystone; B soil horizon formed in upper unit (1bB).

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown, stiff, massive, lean clay (CL) with sand, gravel and subangular to subround cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 1.5 to 3.5 feet thick.

TEST PIT 46

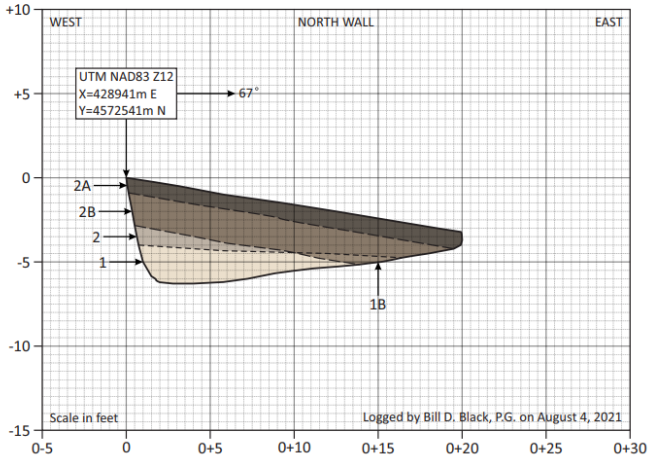


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - olive-brown, strong, massive, weathered claystone.

Unit 2. *Late Pleistocene mass wasting colluvium* - sequence of dense, massive colluvium comprised of a lower (2a) olive to brown, clayey gravel (GC) with sand and subangular cobbles with stage II carbonate; and an upper (2b) dark grayish-brown, clayey gravel (GC) with sand; A and B soil horizons formed in unit (2aB, 2bB and 2bA); overall about 3.5 feet thick.

TEST PIT 47

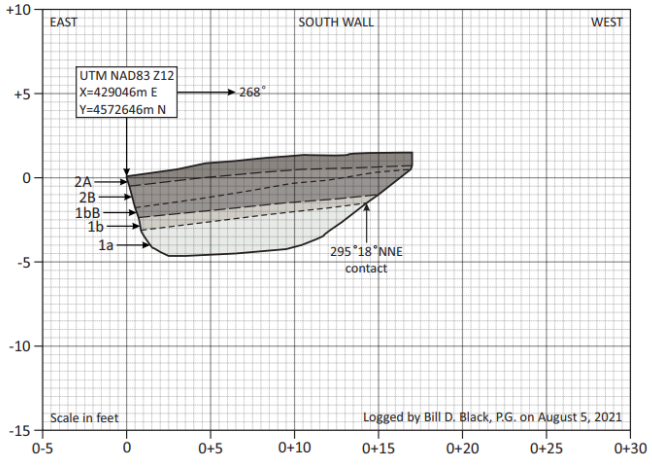


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - olive to light olive, strong, massive, weathered claystone with carbonate stringers in west test pit end; B soil horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown, stiff, massive, lean clay (CL) with sand and gravel; root penetrated; A and B soil horizons formed in unit (2A and 2B).; about 2 to 4 feet thick.

TEST PIT 48

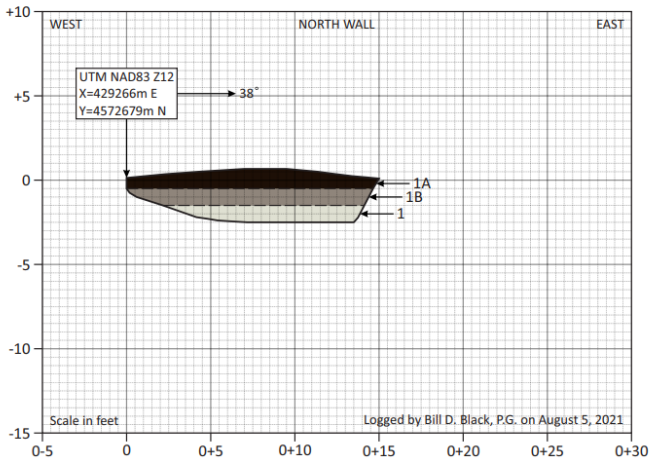


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of brown, strong, poorly bedded to massive, weathered bedrock comprised of a lower (1a) claystone; and an upper (1b) matrix supported, tuffaceous conglomerate with subround to subangular clasts with stage II carbonate; B soil horizon formed in upper unit (1bB).

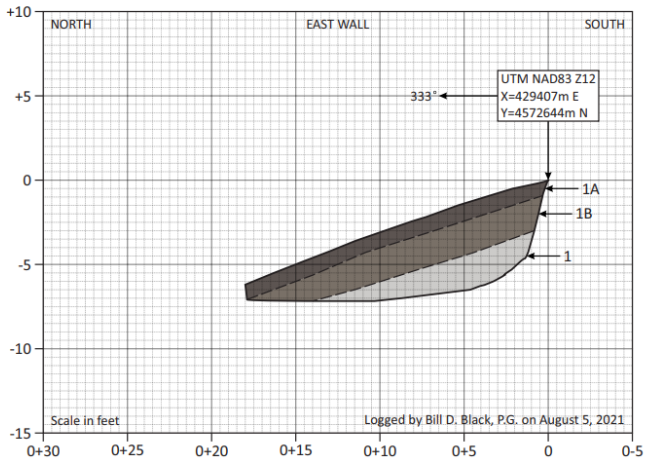
Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown to dark grayish-brown, medium dense to dense, massive, clayey gravel (GC) with sand and subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 1 to 2 feet thick.

TEST PIT 49



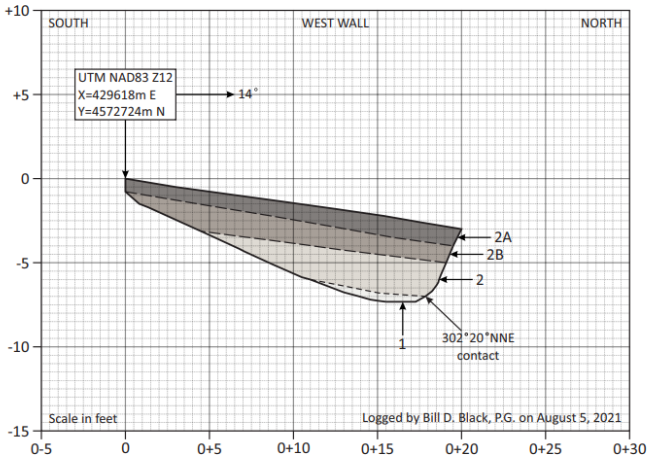
Unit 1. *Tertiary Norwood Formation* - light olive brown, strong, poorly bedded to massive, weathered siltstone; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 50



Unit 1. *Late Pleistocene to Holocene mixed alluvium and colluvium* - dark brown, stiff to very stiff, poorly bedded to massive, lean clay (CL) with sand, gravel and rare subround cobbles; contains discontinuous pebble gravel lenses; A and B soil horizons formed in unit (1A and 1B); thickness > 5 feet.

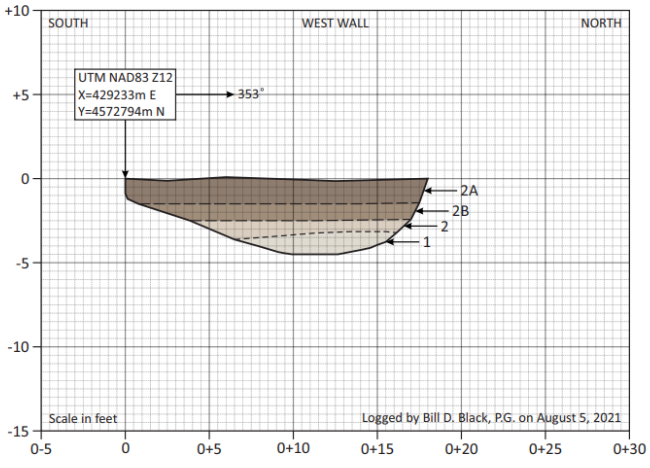
TEST PIT 51



Unit 1. *Tertiary Norwood Formation* - light brownish-olive, strong, poorly bedded, weathered siltstone.

Unit 2. *Late Pleistocene mass wasting colluvium* - yellowish-brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and siltstone clasts; A and B soil horizons formed in unit (2A and 2B); about 4.5 feet thick.

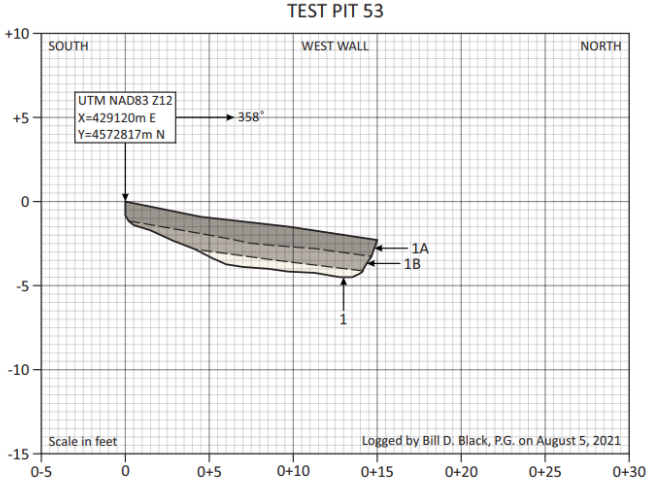
TEST PIT 52



Unit 1. *Tertiary Norwood Formation* - light brownish-olive, strong, poorly bedded to thinly laminated, weathered siltstone.

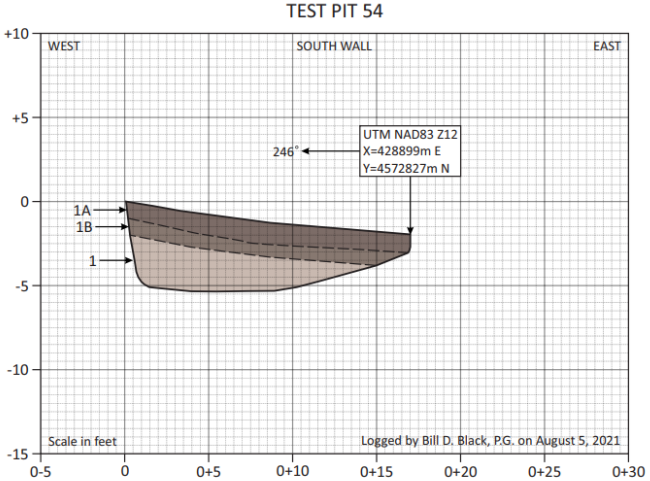
Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown to dark grayish-brown, stiff to medium stiff, massive, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 3 to 3.5 feet thick.

TEST PIT 53



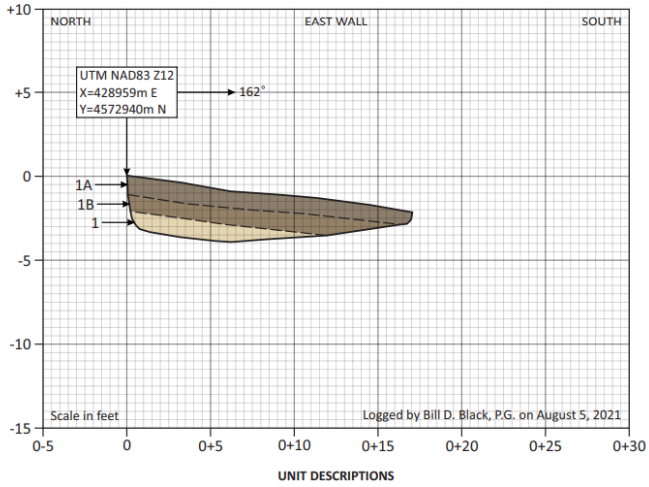
Unit 1. *Tertiary Norwood Formation* - light olive brown, strong, poorly bedded to massive, weathered siltstone; A and B soil horizons formed in unit (1A and 1B); refusal at test pit floor.

TEST PIT 54



Unit 1. *Tertiary Norwood Formation* - dark olive to dark grayish-brown, strong, massive, weathered matrix-supported tuffaceous conglomerate; A and B soil horizons formed in unit (1A and 1B).

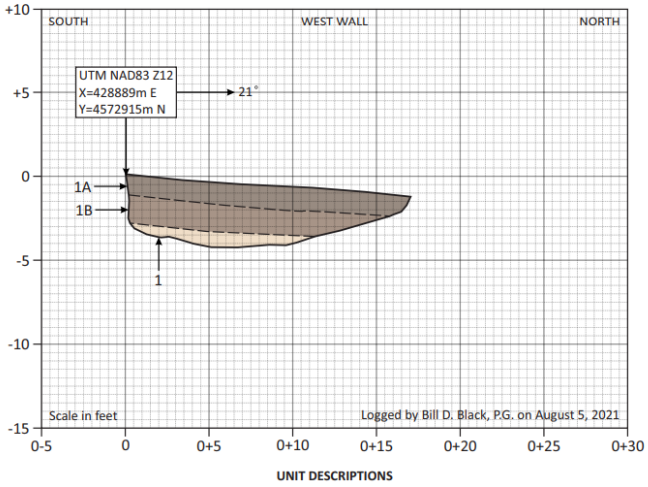
TEST PIT 55



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - reddish-brown to dark grayish-brown, strong, massive, weathered claystone grading to tuffaceous conglomerate in upper part; A and B soil horizons formed in unit (1A and 1B).

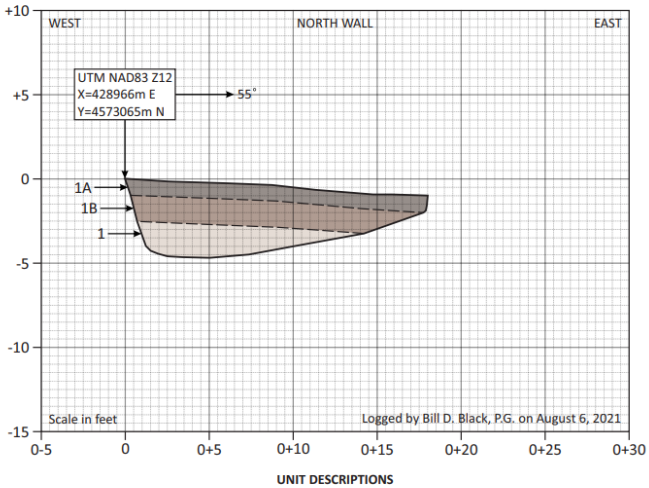
TEST PIT 56



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - brown to dark grayish-brown, strong, massive, weathered claystone with gravel in upper part; A and B soil horizons formed in unit (1A and 1B).

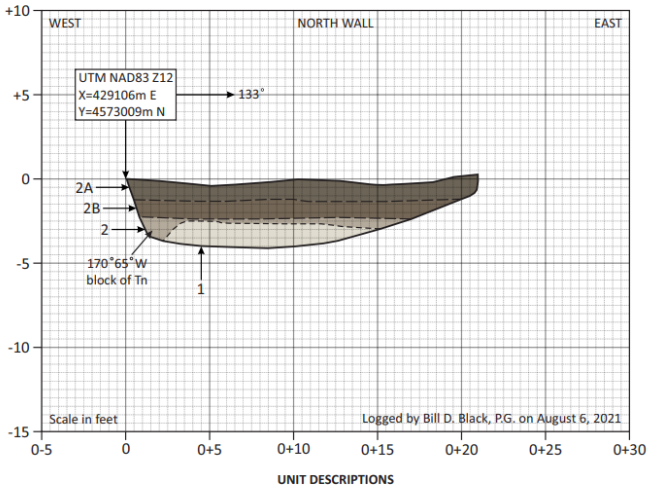
TEST PIT 57



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brown, orange-brown and dark brown; strong to very strong; massive, weathered claystone in lower part grading to tuffaceous conglomerate with subangular clasts with stage II carbonate in upper part; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 58

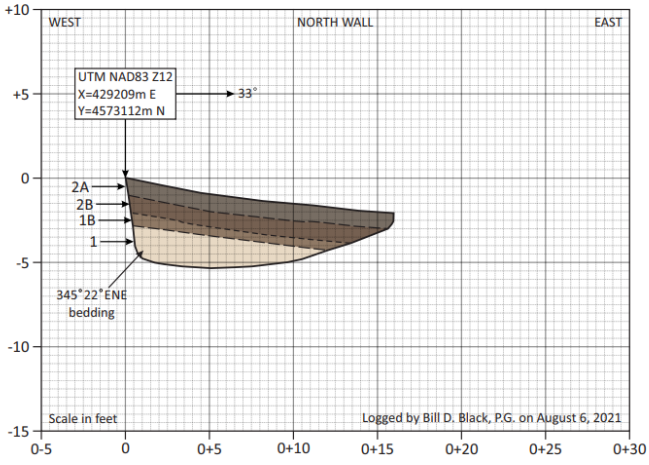


UNIT DESCRIPTIONS

Unit 1. *Middle to late Pleistocene mass wasting colluvium* - light brown to light olive-brown; dense to very dense, massive, clayey sand (SC) with gravel and fractured tuffaceous sandstone blocks; thickness > 1.5 feet.

Unit 2. *Late Pleistocene mass wasting colluvium* - brown to dark grayish-brown, stiff, massive, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 2.5 to 3.5 feet thick.

TEST PIT 59

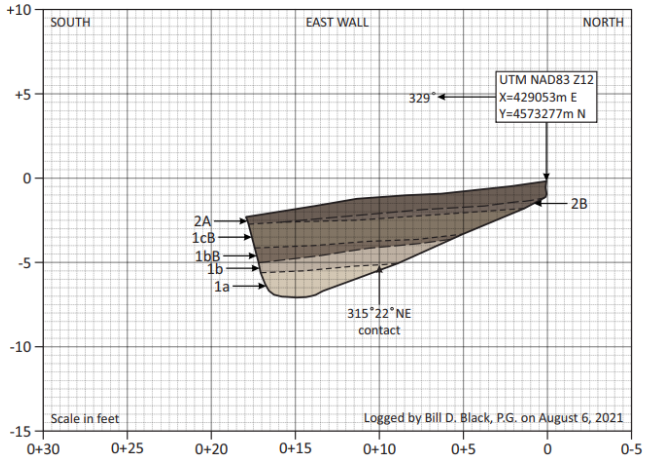


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light brown, strong, poorly to well bedded, weathered tuffaceous sandstone with carbonate-enriched pebble interbeds; B soil horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown, stiff, massive, lean clay (CL) with sand and gravel; A and B soil horizons formed in unit (2A and 2B); about 2.5 feet thick.

TEST PIT 60

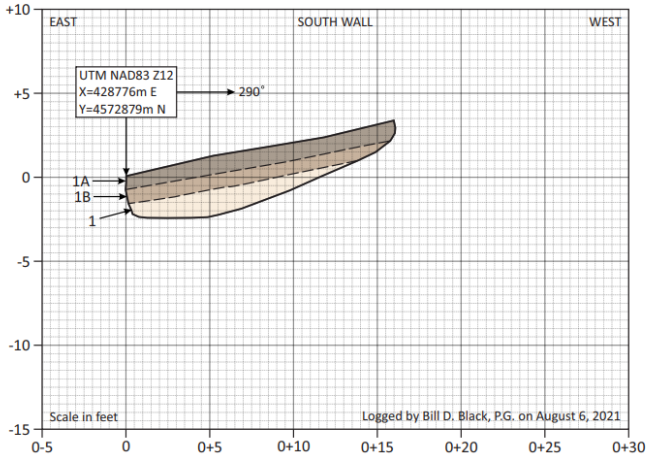


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - sequence of weathered bedrock comprised of a lower (1a) light brown, strong, massive, tuffaceous sandstone; a middle (1b) dark brown, strong to medium strong, tuffaceous conglomerate; and an upper (1c) light brownish-olive, medium strong, massive, claystone; B soil horizon formed in middle and upper units (1bB and 1cB).

Unit 2. *Late Pleistocene mass wasting colluvium* - dark grayish-brown, medium dense, massive, clayey gravel (GC) with sand and angular to subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 0.5 to 1.5 feet thick.

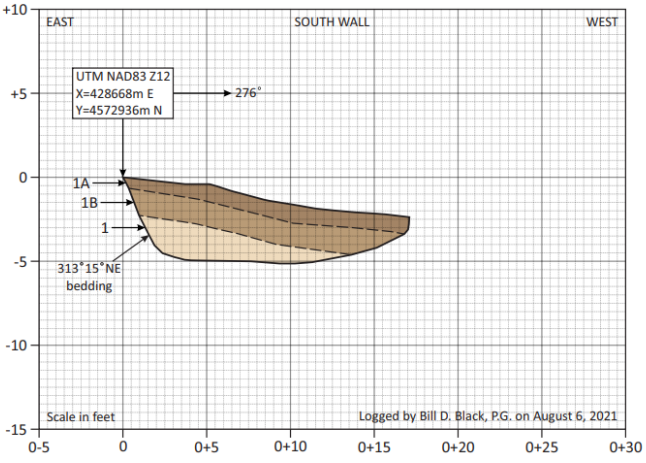
TEST PIT 61



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - light orange-brown to dark brown, strong, poorly bedded to massive, weathered tuffaceous conglomerate; A and B soil horizons formed in unit (1A and 1B).

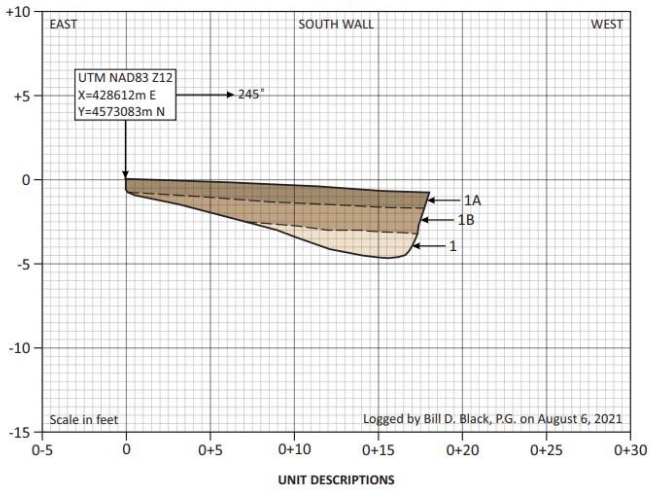
TEST PIT 62



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown to brown, poorly bedded, strong, claystone to pebble conglomerate; A and B soil horizons formed in unit (1A and 1B).

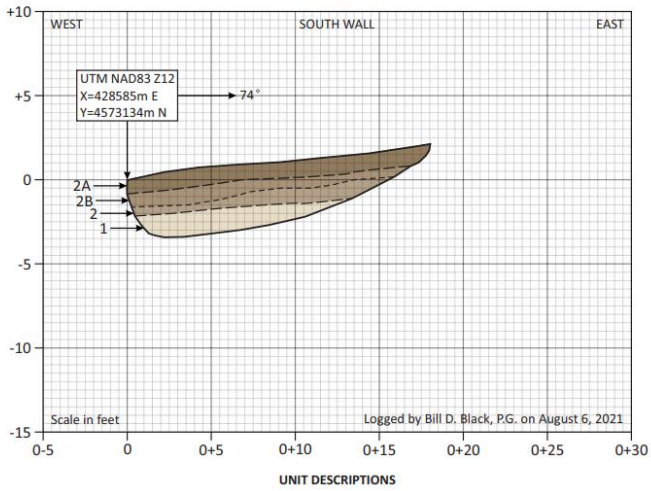
TEST PIT 63



UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - orange-brown to dark brown, strong, massive, weathered tuffaceous conglomerate with subangular clasts with stage II carbonate; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 64

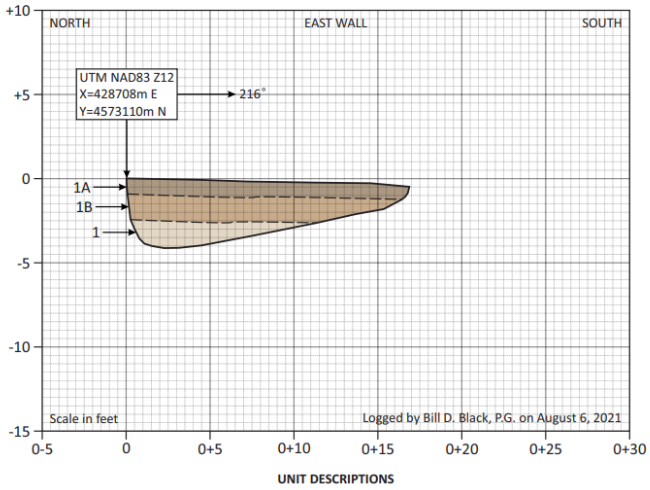


UNIT DESCRIPTIONS

Unit 1. *Tertiary Norwood Formation* - olive-brown to orange-brown, strong, massive, weathered claystone grading upward to matrix-supported tuffaceous conglomerate; B soil horizon formed in unit (1B).

Unit 2. *Late Pleistocene mass wasting colluvium* - dark brown, dense, massive, clayey gravel (GC) with sand, trace subround to subangular cobbles with stage II carbonate in basal part of unit; A and B soil horizons formed in unit (2A and 2B); 1.5 to 2 feet thick.

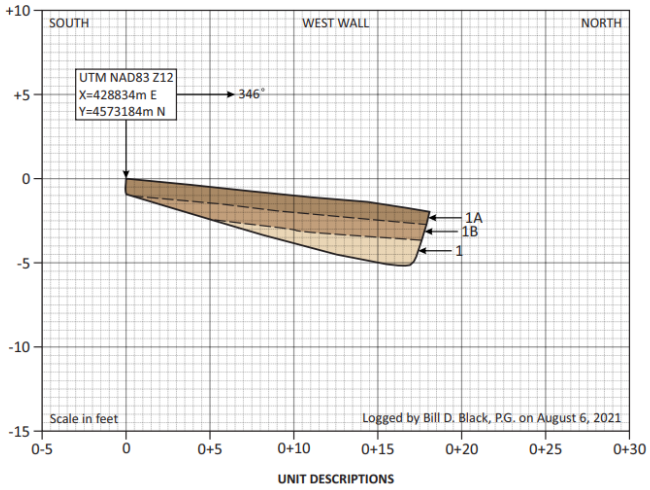
TEST PIT 65



UNIT DESCRIPTIONS

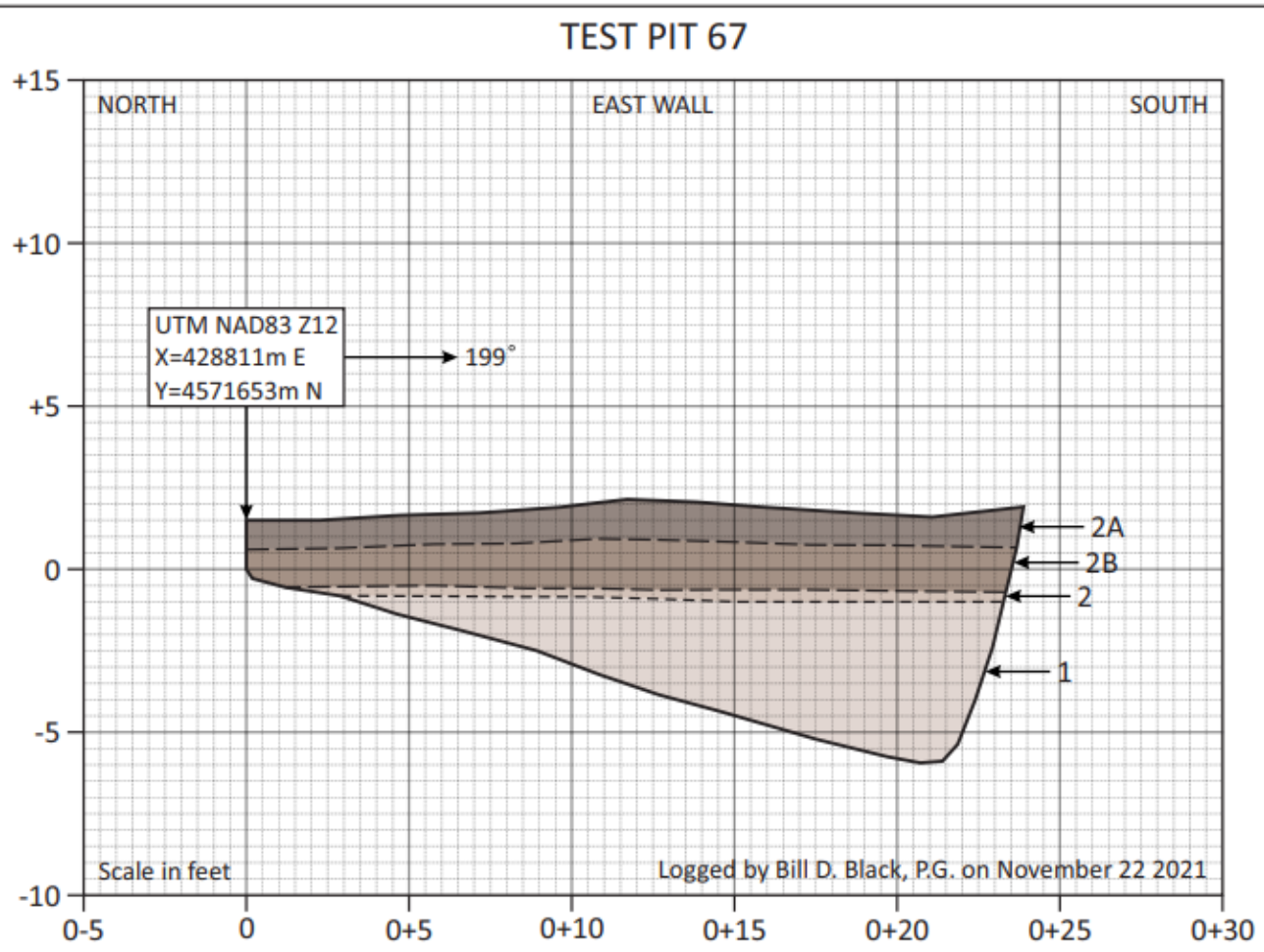
Unit 1. *Tertiary Norwood Formation* - reddish-brown to brown, strong, massive, weathered, matrix-supported tuffaceous conglomerate with subangular qaurtzite clasts with stage II carbonate; A and B soil horizons formed in unit (1A and 1B).

TEST PIT 66



UNIT DESCRIPTIONS

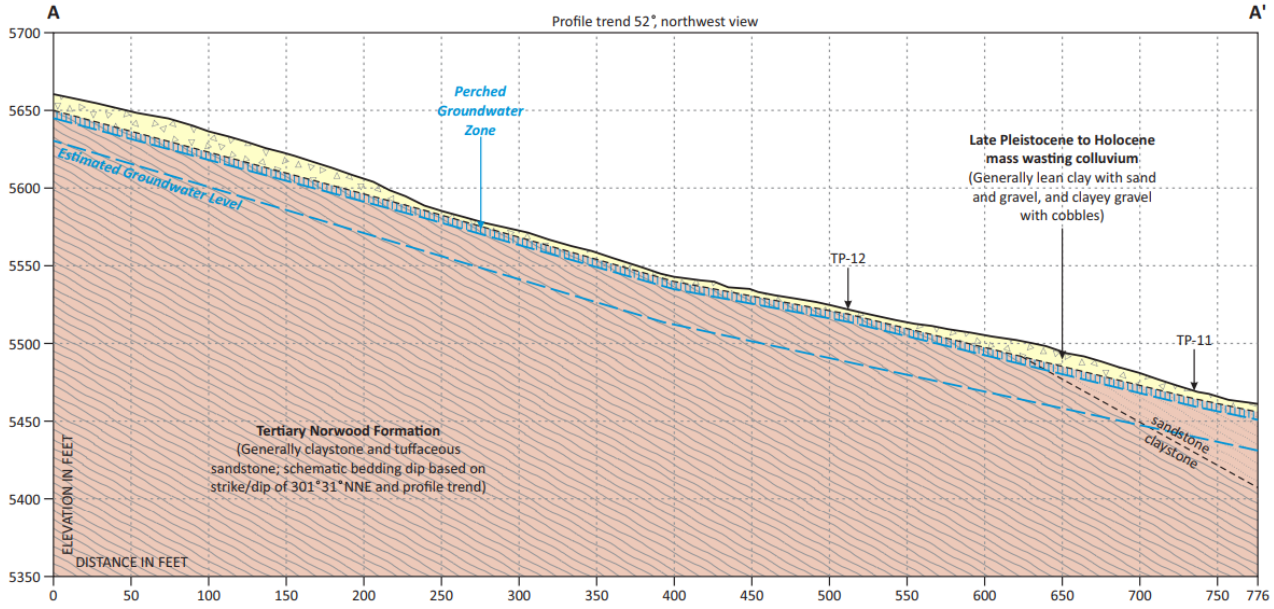
Unit 1. *Tertiary Norwood Formation*- brown to dark brown, strong to very strong, massive, weathered claystone; A and B soil horizons formed in unit (1A and 1B).

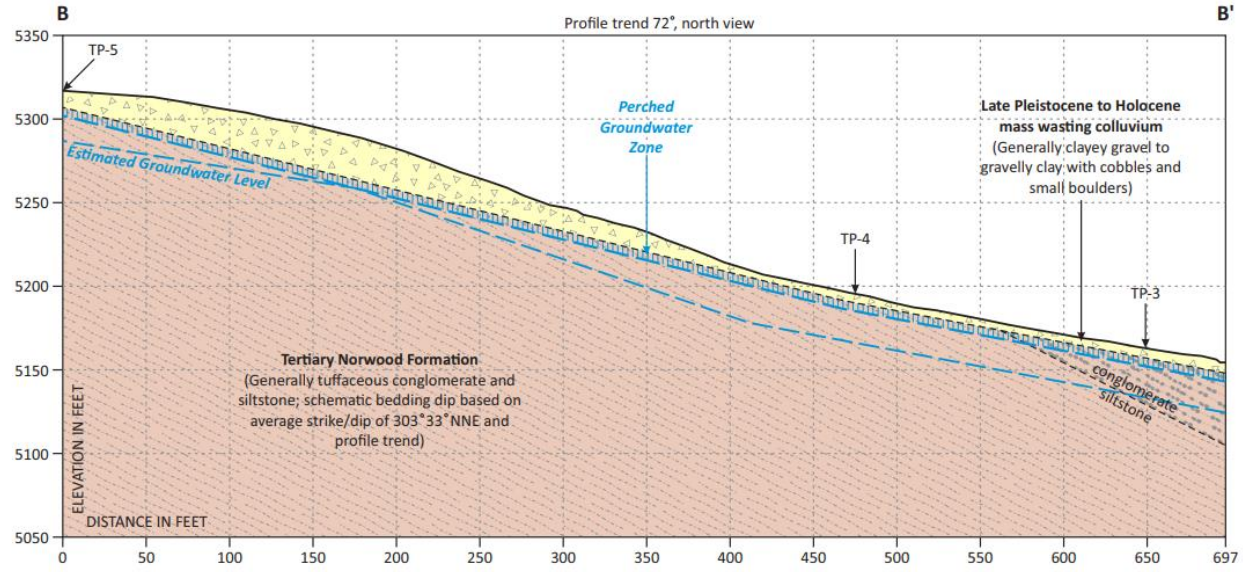


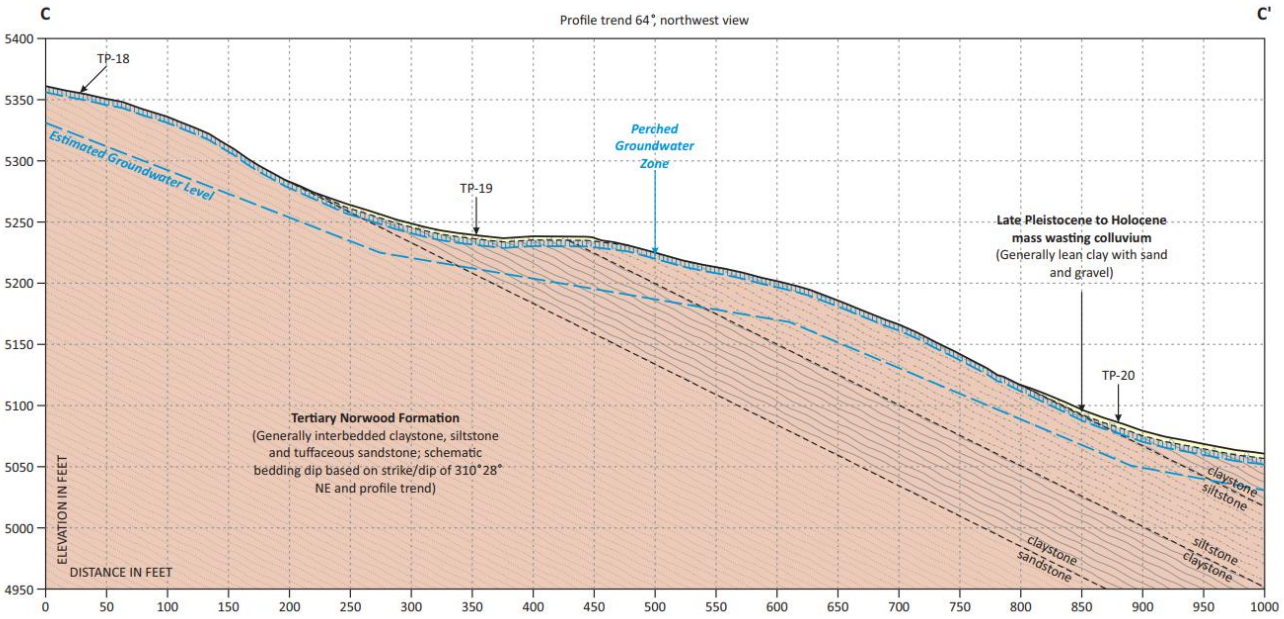
UNIT DESCRIPTIONS

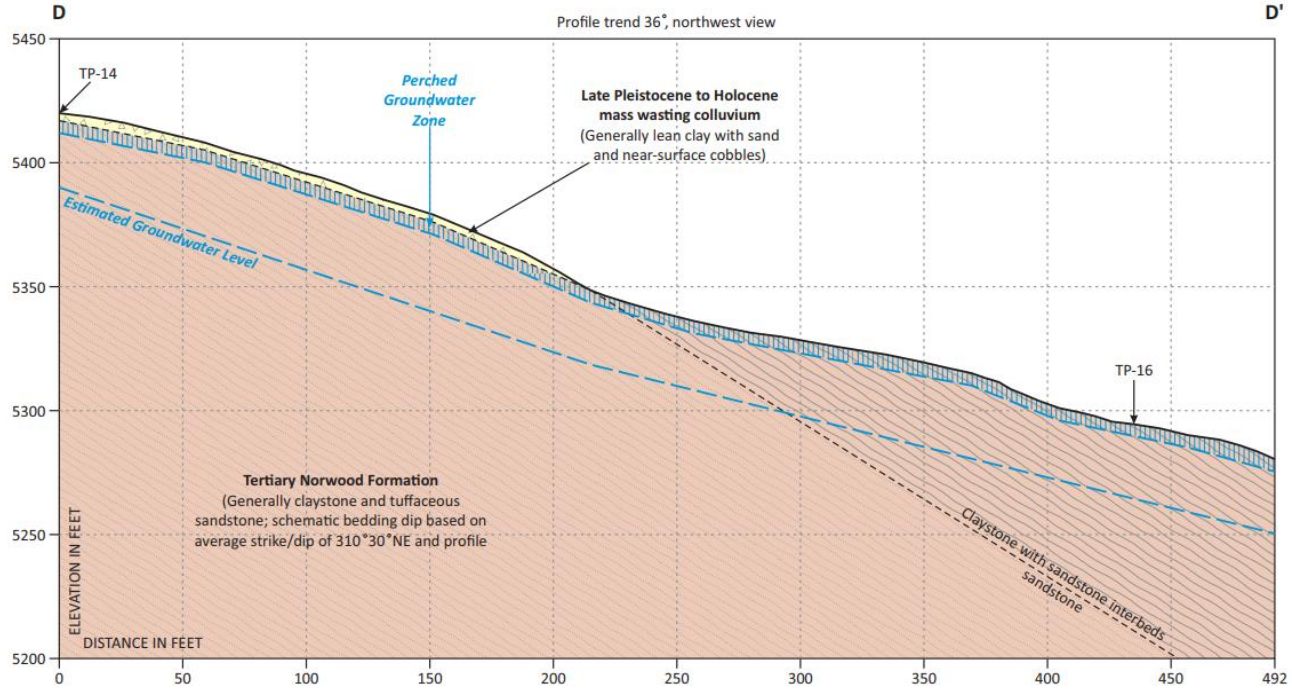
Unit 1. *Tertiary Norwood Formation* - brown, orange-brown and light reddish-brown, strong to very strong, massive, weathered tuffaceous conglomerate.

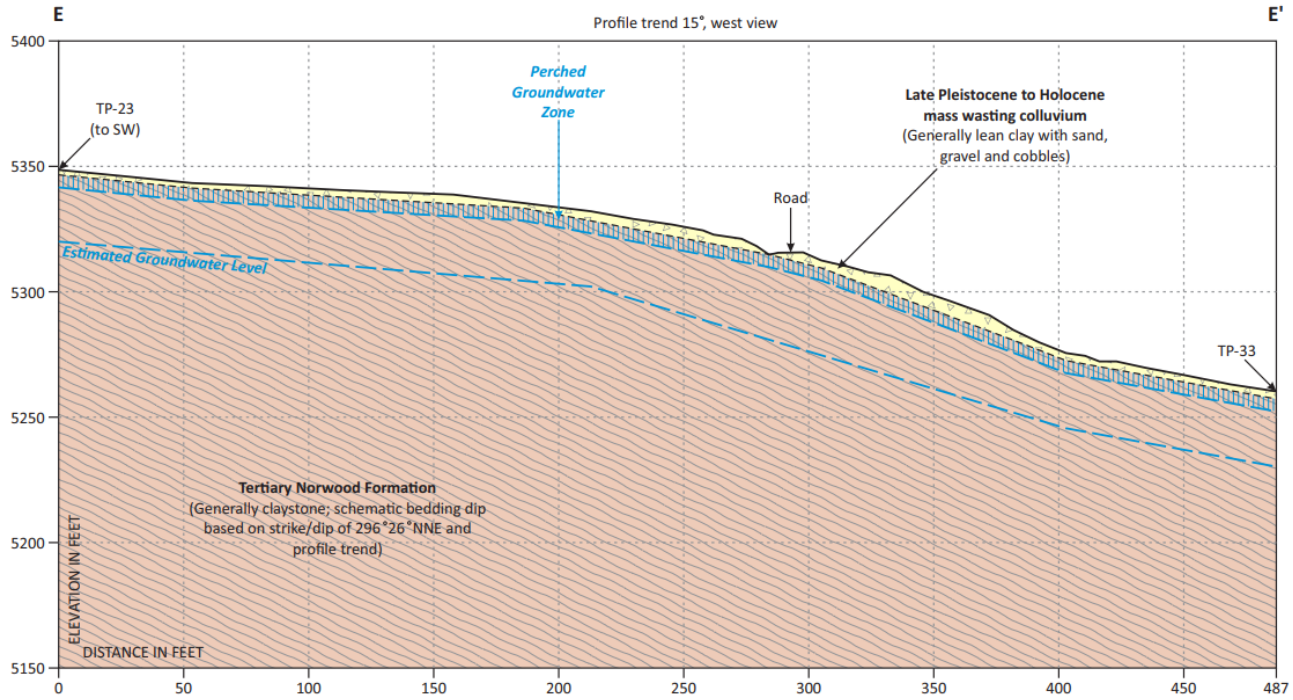
Unit 2. *Late Pleistocene mass wasting colluvium* - reddish-brown to dark grayish-brown, medium dense, massive, clayey gravel (GC) with trace subangular cobbles with stage II carbonate; A and B soil horizons formed in unit (2A and 2B); about 2.5 to 3 feet thick.

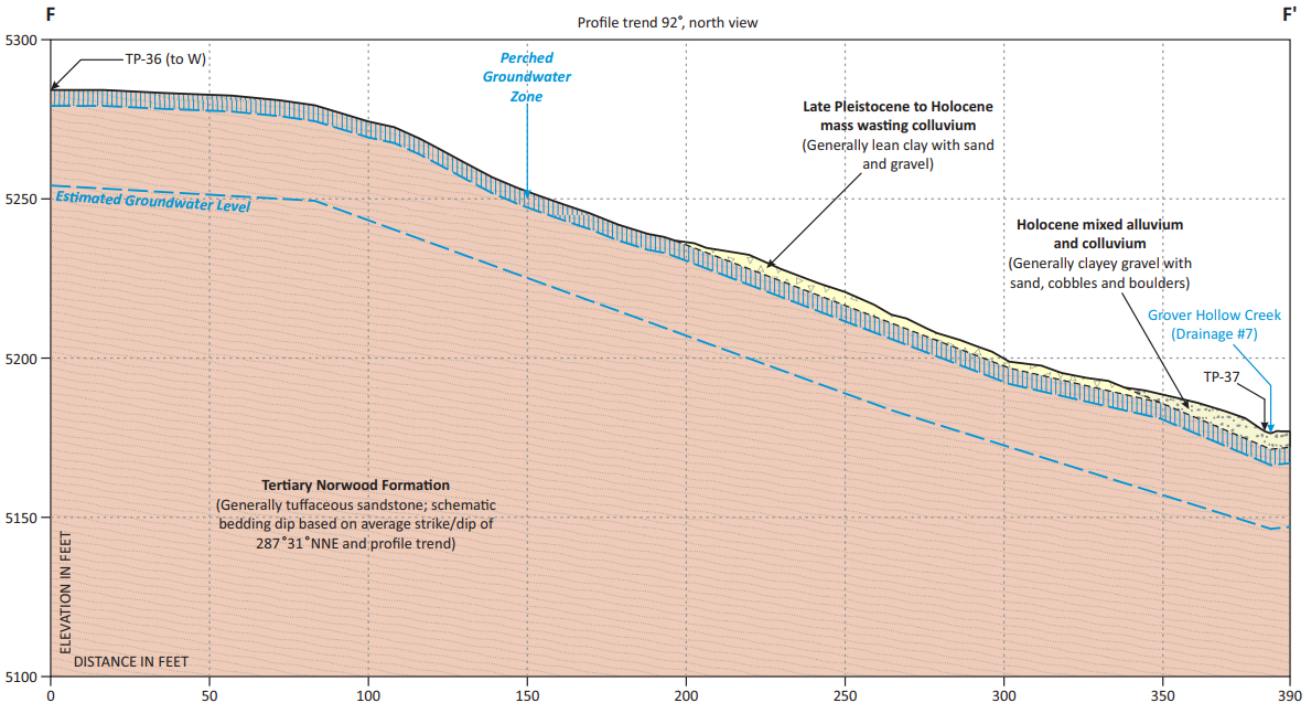

A
A'
Profile trend 52°, northwest view
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel, and clayey gravel with cobbles)
TP-12
TP-11
Tertiary Norwood Formation
(Generally claystone and tuffaceous sandstone; schematic bedding dip based on strike/dip of 301°31°NNE and profile trend)
sandstone
claystone
ELEVATION IN FEET
DISTANCE IN FEET
5700
5650
5600
5550
5500
5450
5400
5350
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
776

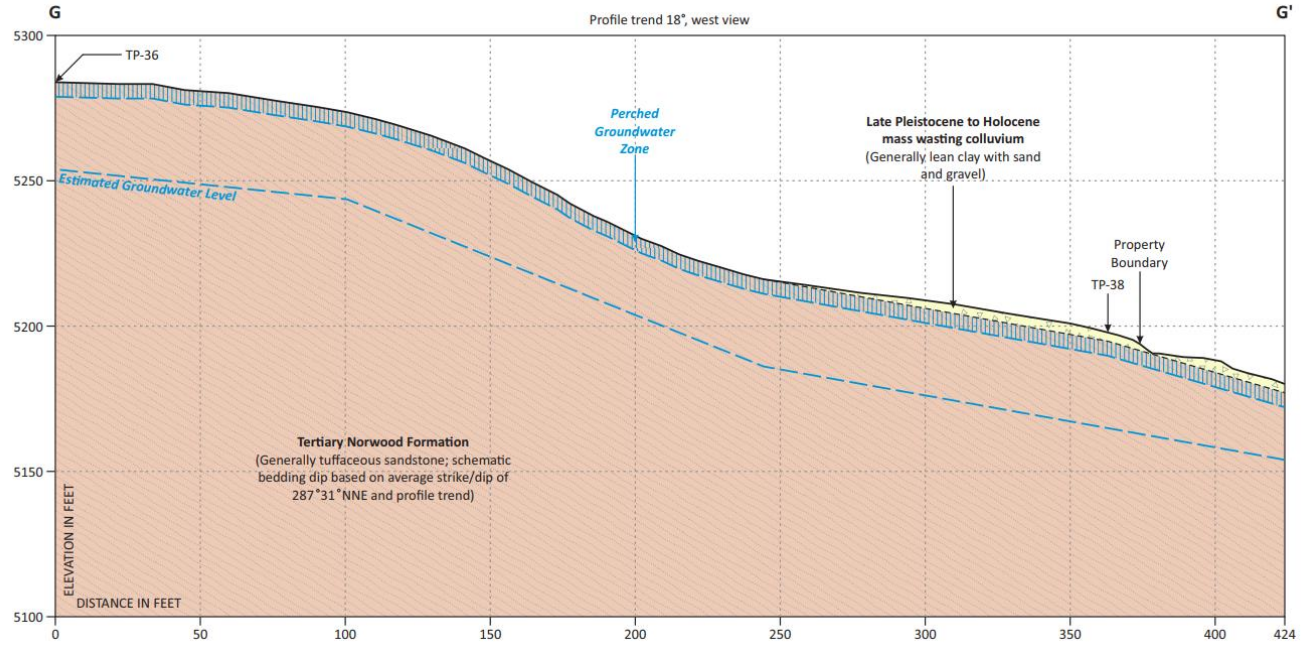

B
B'
Profile trend 72°, north view
TP-5
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally clayey gravel to gravelly clay with cobbles and small boulders)
TP-4
TP-3
Tertiary Norwood Formation
(Generally tuffaceous conglomerate and siltstone; schematic bedding dip based on average strike/dip of 303°33°NNE and profile trend)
conglomerate
siltstone
ELEVATION IN FEET
DISTANCE IN FEET
5350
5300
5250
5200
5150
5100
5050
0
50
100
150
200
250
300
350
400
450
500
550
600
650
697

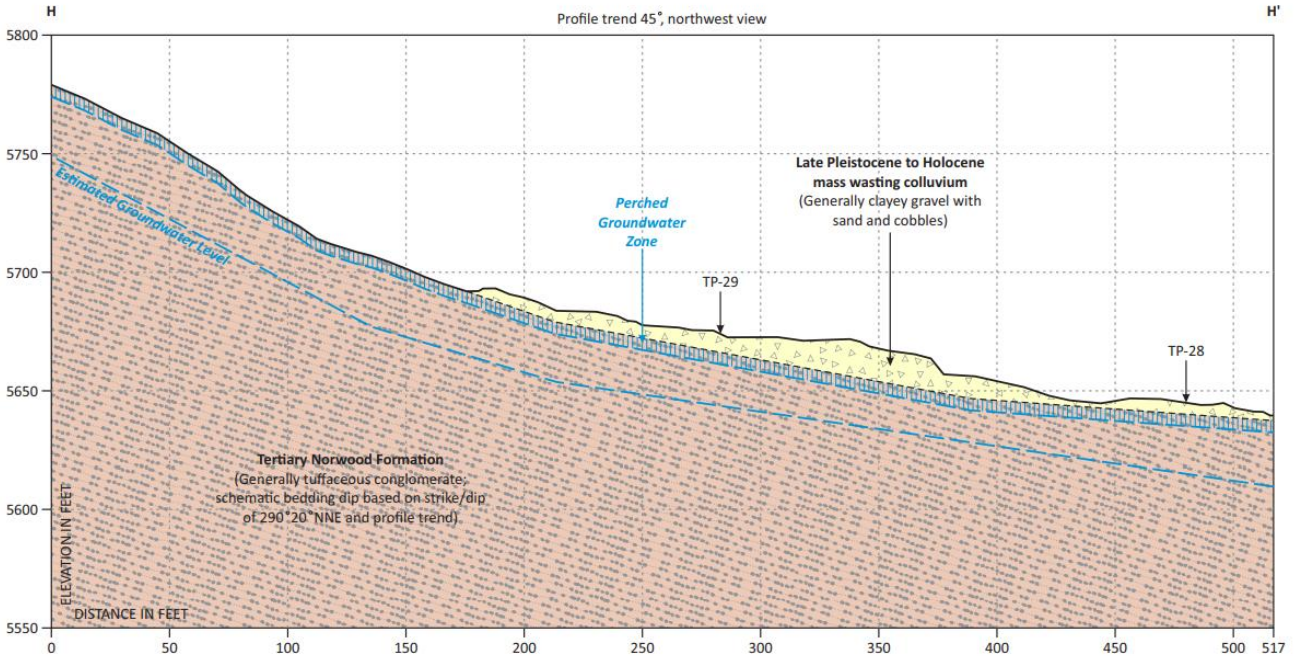

C
Profile trend 64°, northwest view
C'
TP-18
TP-19
TP-20
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel)
Tertiary Norwood Formation
(Generally interbedded claystone, siltstone and tuffaceous sandstone; schematic bedding dip based on strike/dip of 310°28° NE and profile trend)
claystone
siltstone
claystone
sandstone
siltstone
claystone
ELEVATION IN FEET
DISTANCE IN FEET
5400
5350
5300
5250
5200
5150
5100
5050
5000
4950
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000

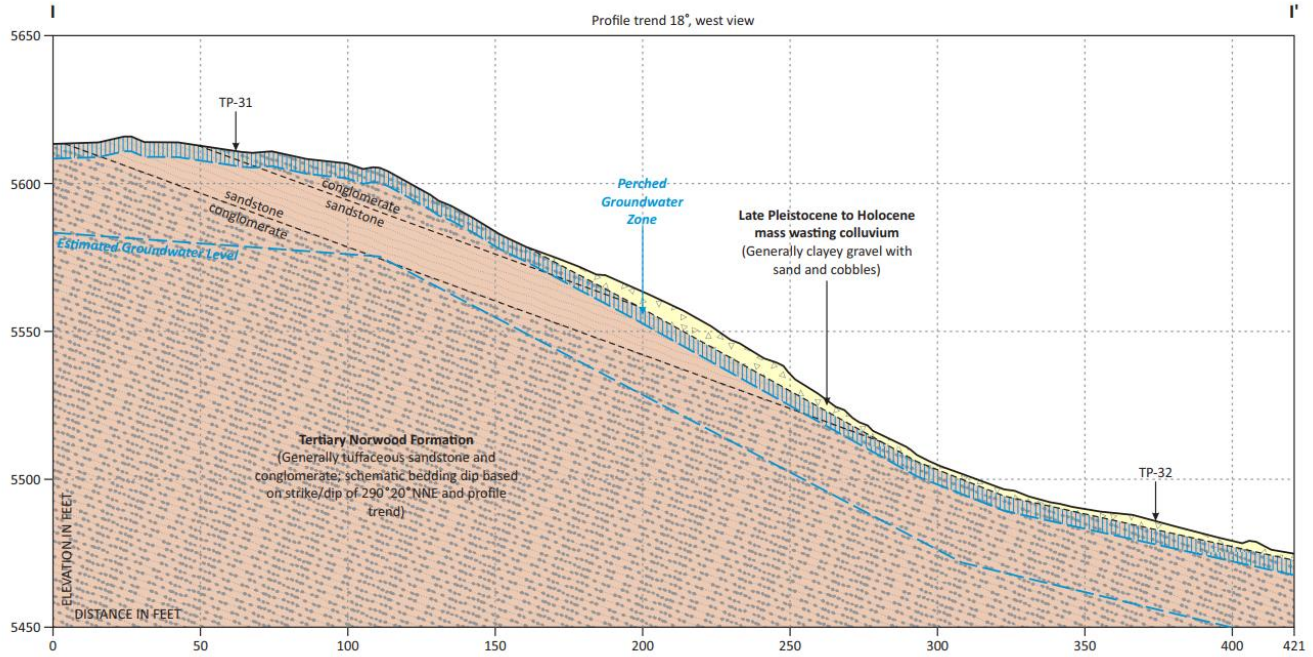

D
Profile trend 36°, northwest view
D'
TP-14
TP-16
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and near-surface cobbles)
Estimated Groundwater Level
Tertiary Norwood Formation
(Generally claystone and tuffaceous sandstone; schematic bedding dip based on average strike/dip of 310°30°NE and profile
Claystone with sandstone interbeds
sandstone
ELEVATION IN FEET
DISTANCE IN FEET
5450
5400
5350
5300
5250
5200
0
50
100
150
200
250
300
350
400
450
492

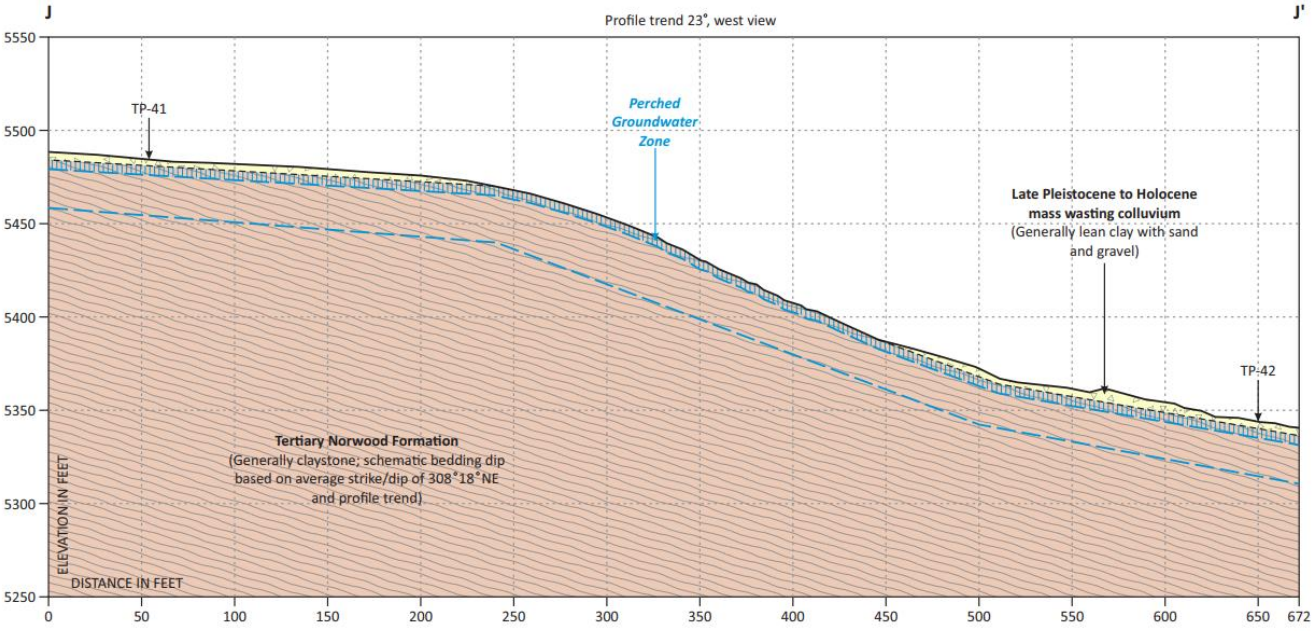

E
Profile trend 15°, west view
E'
5400
5350
5300
5250
5200
5150
TP-23
(to SW)
Perched
Groundwater
Zone
Late Pleistocene to Holocene
mass wasting colluvium
(Generally lean clay with sand,
gravel and cobbles)
Road
Estimated Groundwater Level
TP-33
Tertiary Norwood Formation
(Generally claystone; schematic bedding dip
based on strike/dip of 296°26°NNE and
profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
0
50
100
150
200
250
300
350
400
450
487

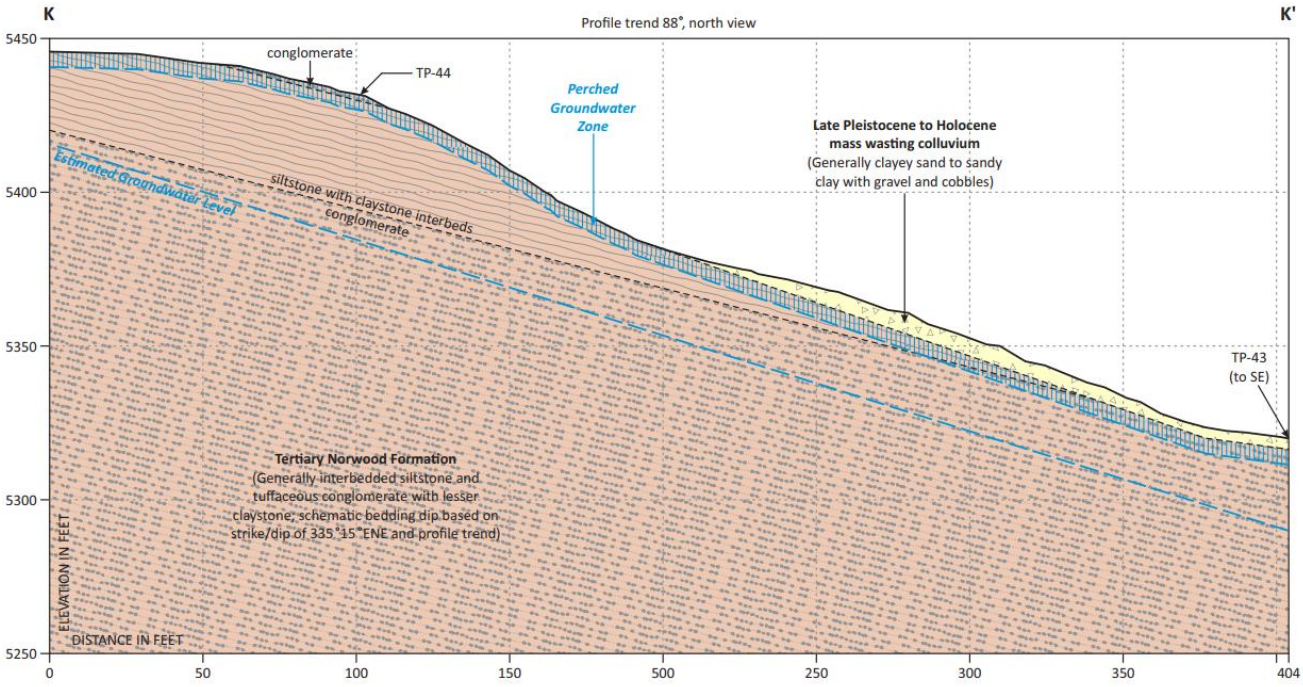

F
Profile trend 92°, north view
F'
5300
5250
5200
5150
5100
TP-36 (to W)
Perched
Groundwater
Zone
Late Pleistocene to Holocene
mass wasting colluvium
(Generally lean clay with sand
and gravel)
Estimated Groundwater Level
Holocene mixed alluvium
and colluvium
(Generally clayey gravel with
sand, cobbles and boulders)
Grover Hollow Creek
(Drainage #7)
TP-37
Tertiary Norwood Formation
(Generally tuffaceous sandstone; schematic
bedding dip based on average strike/dip of
287°31°NNE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
0
50
100
150
200
250
300
350
390

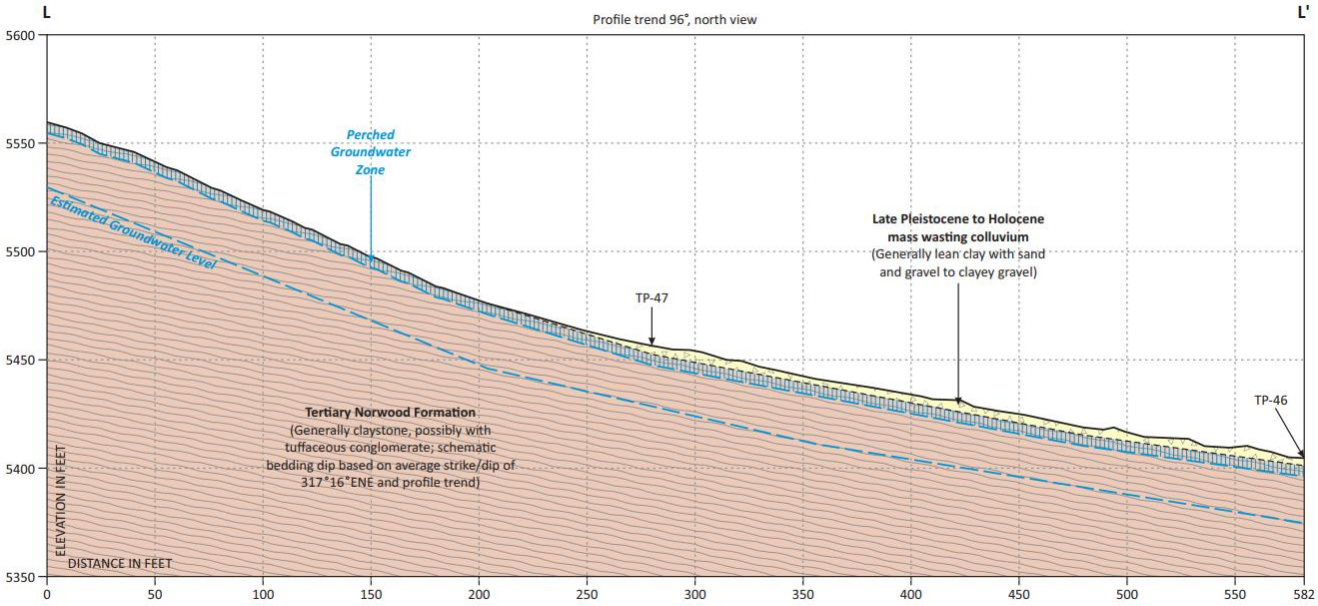

G
Profile trend 18°, west view
G'
TP-36
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel)
Estimated Groundwater Level
Property Boundary
TP-38
Tertiary Norwood Formation
(Generally tuffaceous sandstone; schematic bedding dip based on average strike/dip of 287°31°NNE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5300
5250
5200
5150
5100
0
50
100
150
200
250
300
350
400
424

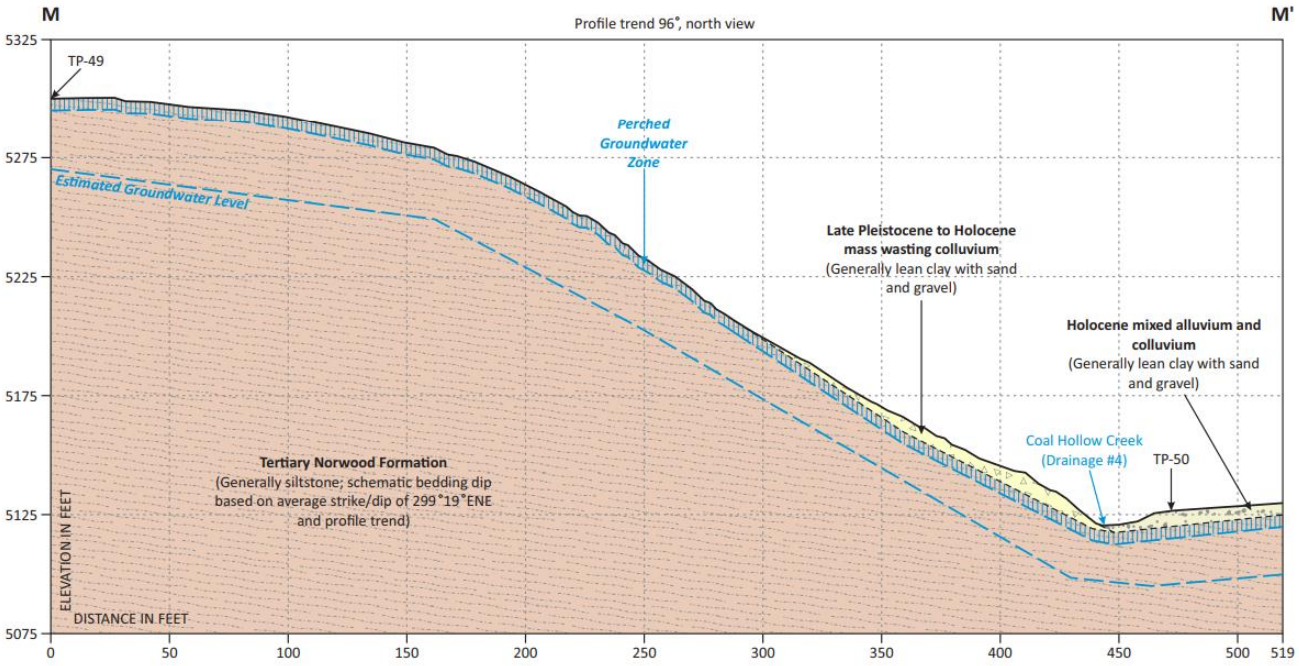

H
Profile trend 45°, northwest view
H'
Late Pleistocene to Holocene mass wasting colluvium
(Generally clayey gravel with sand and cobbles)
Perched Groundwater Zone
Estimated Groundwater Level
TP-29
TP-28
Tertiary Norwood Formation
(Generally tuffaceous conglomerate; schematic bedding dip based on strike/dip of 290°20°NNE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5800
5750
5700
5650
5600
5550
0
50
100
150
200
250
300
350
400
450
500
517

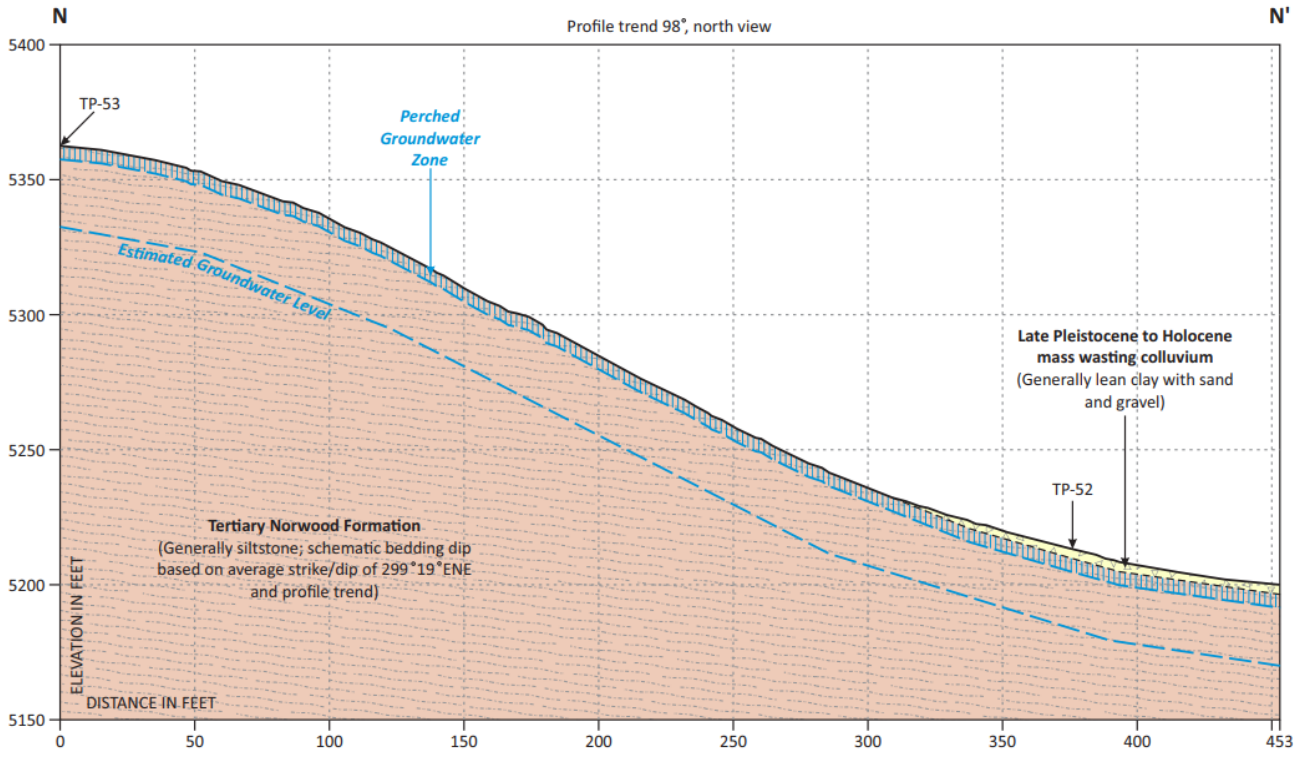

I
I'
Profile trend 18°, west view
5650
5600
5550
5500
5450
TP-31
TP-32
sandstone
conglomerate
conglomerate
sandstone
Estimated Groundwater Level
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally clayey gravel with sand and cobbles)
Tertiary Norwood Formation
(Generally tuffaceous sandstone and conglomerate; schematic bedding dip based on strike/dip of 290°20°NNE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
0
50
100
150
200
250
300
350
400
421

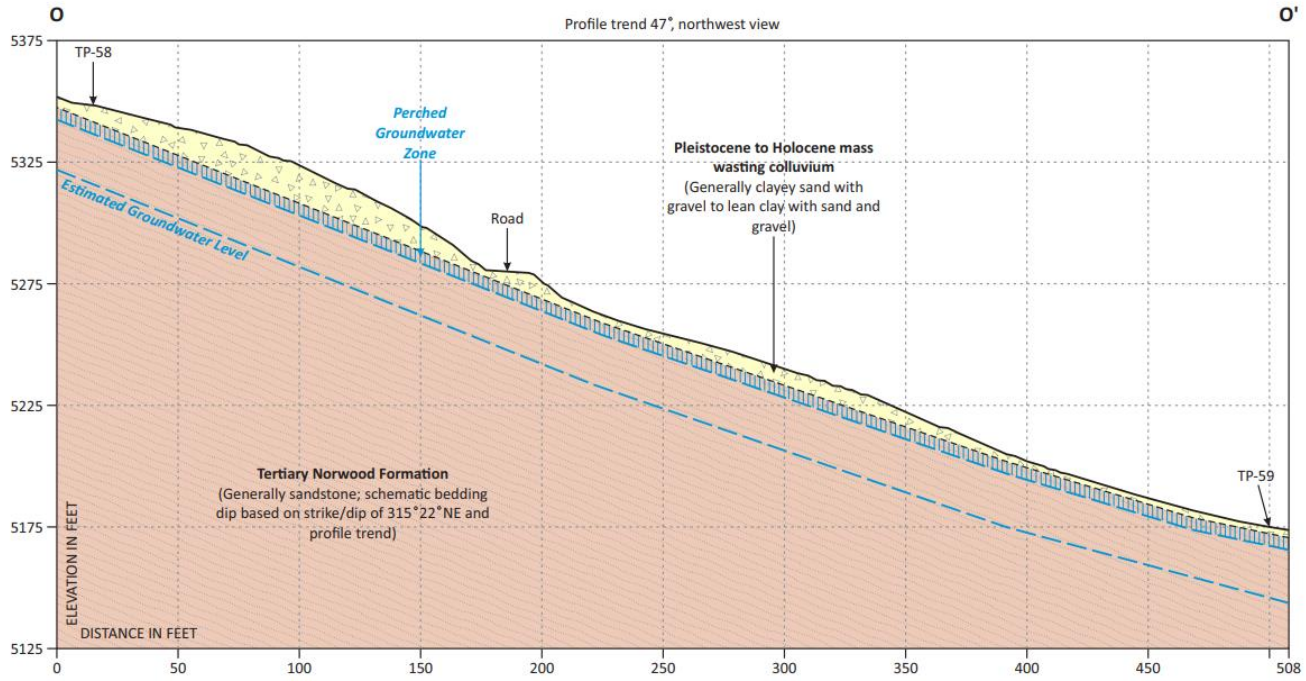

J
J'
Profile trend 23°, west view
5550
5500
5450
5400
5350
5300
5250
TP-41
TP-42
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel)
Tertiary Norwood Formation
(Generally claystone; schematic bedding dip based on average strike/dip of 308°18°NE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
0
50
100
150
200
250
300
350
400
450
500
550
600
650
672

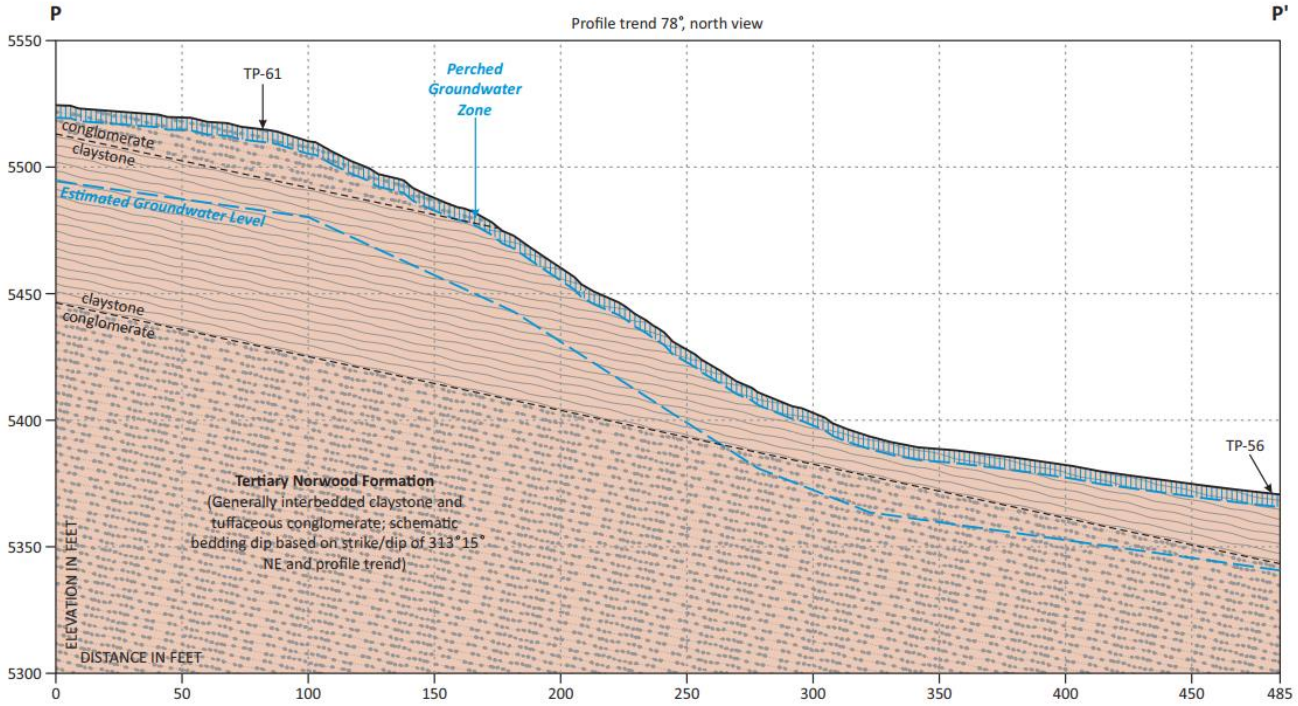

K
Profile trend 88°, north view
K'
conglomerate
TP-44
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally clayey sand to sandy clay with gravel and cobbles)
Estimated Groundwater Level
siltstone with claystone interbeds
conglomerate
TP-43
(to SE)
Tertiary Norwood Formation
(Generally interbedded siltstone and tuffaceous conglomerate with lesser claystone; schematic bedding dip based on strike/dip of 335°15°ENE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5450
5400
5350
5300
5250
0
50
100
150
500
250
300
350
404

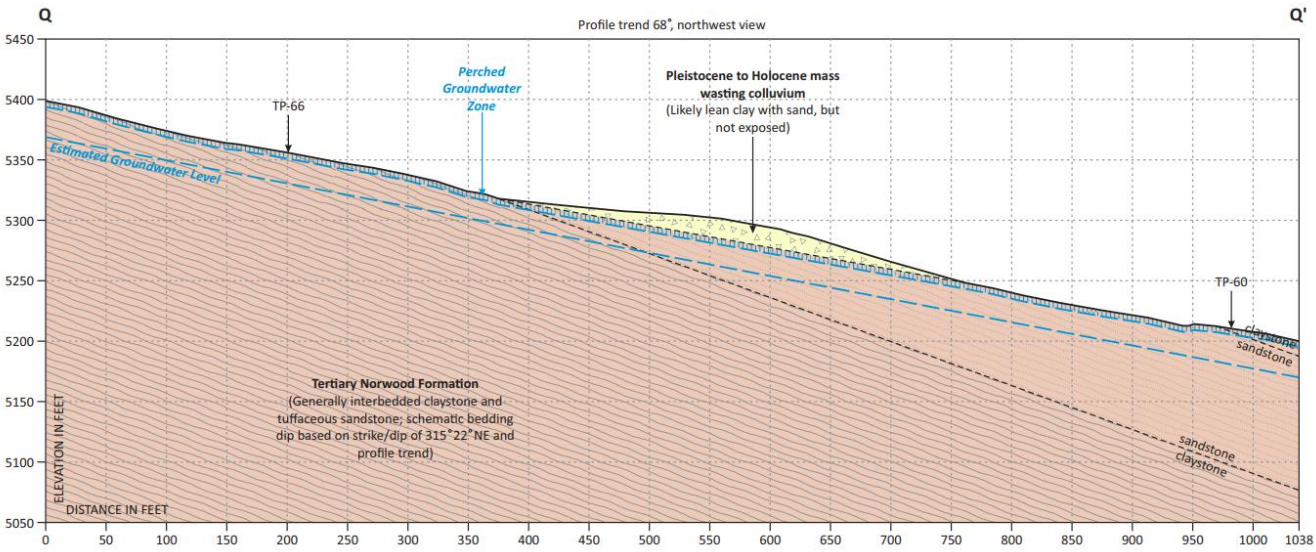

L
Profile trend 96°, north view
L'
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel to clayey gravel)
TP-47
TP-46
Tertiary Norwood Formation
(Generally claystone, possibly with tuffaceous conglomerate; schematic bedding dip based on average strike/dip of 317°16°ENE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5600
5550
5500
5450
5400
5350
0
50
100
150
200
250
300
350
400
450
500
550
582


M
M'
Profile trend 96°, north view
TP-49
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel)
Holocene mixed alluvium and colluvium
(Generally lean clay with sand and gravel)
Coal Hollow Creek (Drainage #4)
TP-50
Tertiary Norwood Formation
(Generally siltstone; schematic bedding dip based on average strike/dip of 299°19°ENE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5325
5275
5225
5175
5125
5075
0
50
100
150
200
250
300
350
400
450
500
519


N
N'
Profile trend 98°, north view
TP-53
Perched Groundwater Zone
Estimated Groundwater Level
Late Pleistocene to Holocene mass wasting colluvium
(Generally lean clay with sand and gravel)
TP-52
Tertiary Norwood Formation
(Generally siltstone; schematic bedding dip based on average strike/dip of 299°19°ENE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5400
5350
5300
5250
5200
5150
0
50
100
150
200
250
300
350
400
453


O
O'
Profile trend 47°, northwest view
TP-58
Perched Groundwater Zone
Estimated Groundwater Level
Road
Pleistocene to Holocene mass wasting colluvium
(Generally clayey sand with gravel to lean clay with sand and gravel)
TP-59
Tertiary Norwood Formation
(Generally sandstone; schematic bedding dip based on strike/dip of 315°22°NE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5375
5325
5275
5225
5175
5125
0
50
100
150
200
250
300
350
400
450
508


P
P'
Profile trend 78°, north view
TP-61
Perched Groundwater Zone
conglomerate
claystone
Estimated Groundwater Level
claystone
conglomerate
TP-56
Tertiary Norwood Formation
(Generally interbedded claystone and tuffaceous conglomerate; schematic bedding dip based on strike/dip of 313°15° NE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5550
5500
5450
5400
5350
5300
0
50
100
150
200
250
300
350
400
450
485


Q
Q'
Profile trend 68°, northwest view
TP-66
Perched Groundwater Zone
Pleistocene to Holocene mass wasting colluvium
(Likely lean clay with sand, but not exposed)
Estimated Groundwater Level
TP-60
claystone
sandstone
Tertiary Norwood Formation
(Generally interbedded claystone and tuffaceous sandstone; schematic bedding dip based on strike/dip of 315°22°NE and profile trend)
sandstone
claystone
ELEVATION IN FEET
DISTANCE IN FEET
5450
5400
5350
5300
5250
5200
5150
5100
5050
0
50
100
150
200
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600
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700
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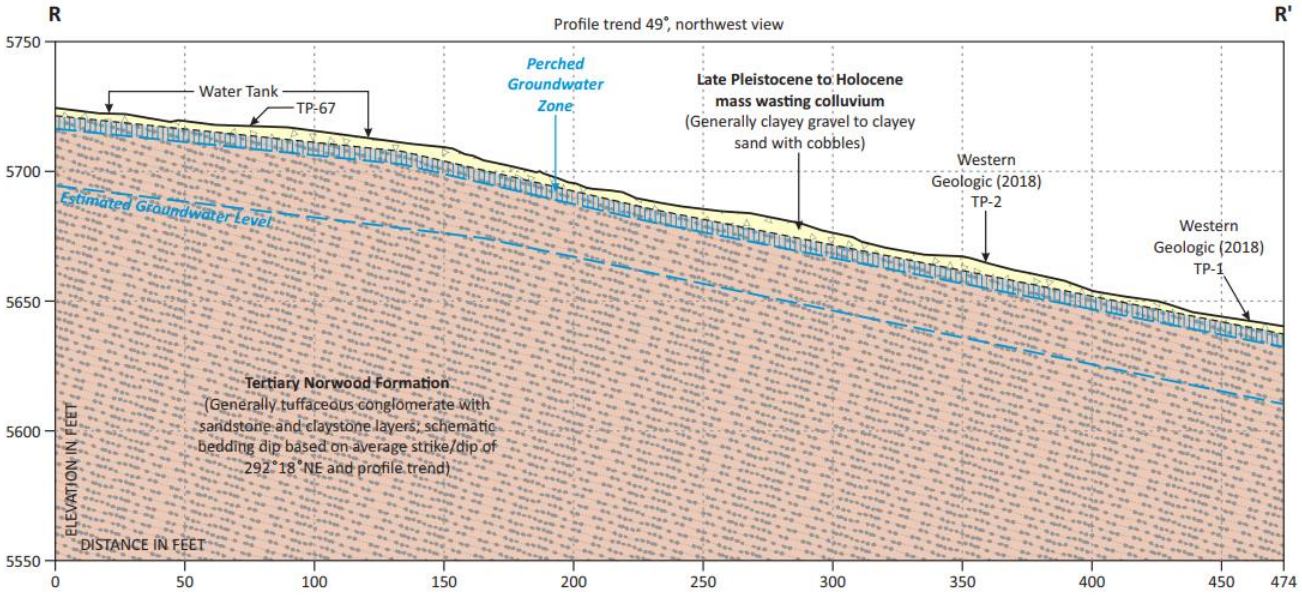
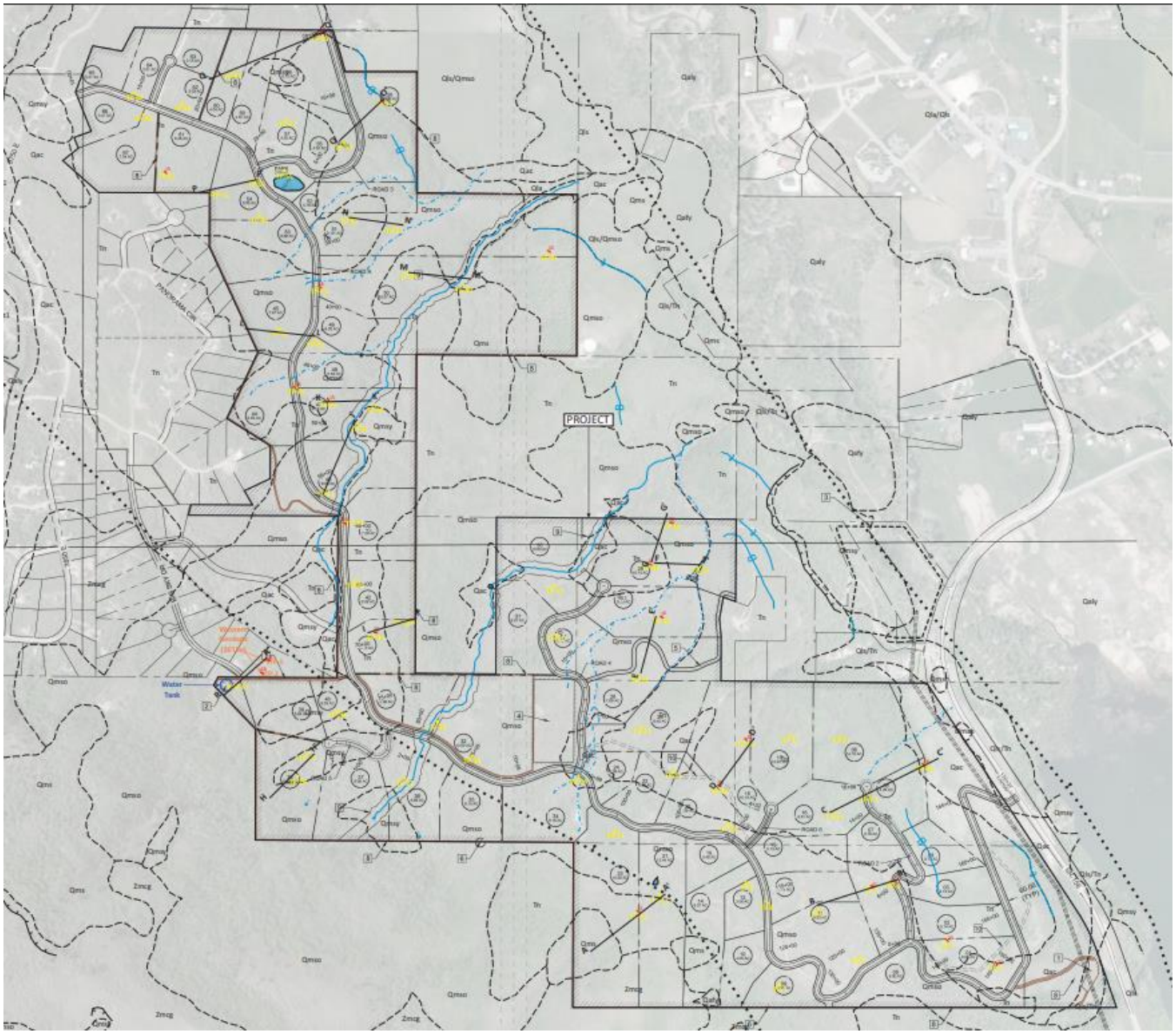
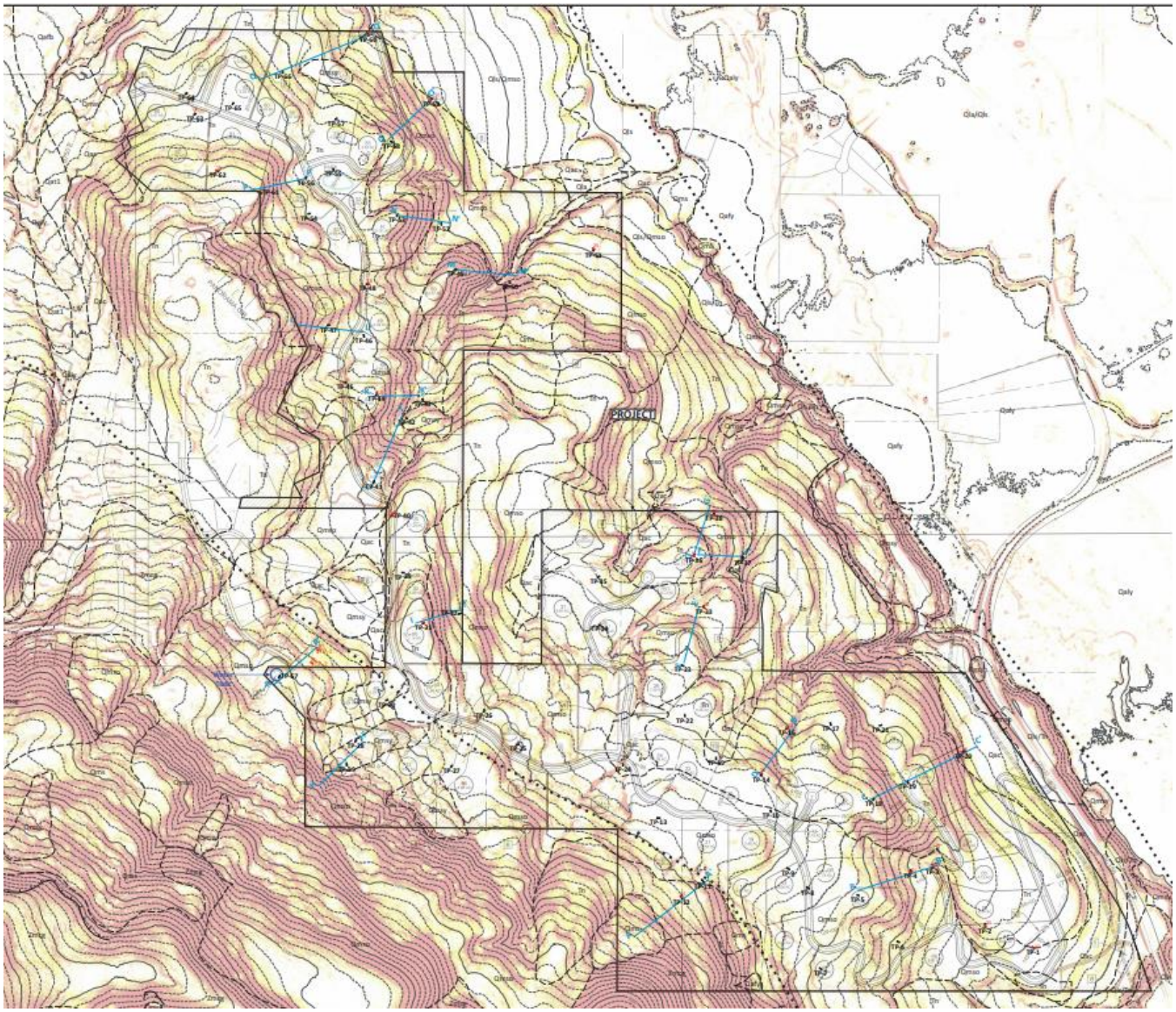
800
850
900
950
1000
1038


R
R'
Profile trend 49°, northwest view
Water Tank
TP-67
Perched Groundwater Zone
Late Pleistocene to Holocene mass wasting colluvium
(Generally clayey gravel to clayey sand with cobbles)
Western Geologic (2018) TP-2
Western Geologic (2018) TP-1
Estimated Groundwater Level
Tertiary Norwood Formation
(Generally tuffaceous conglomerate with sandstone and claystone layers; schematic bedding dip based on average strike/dip of 292°18°NE and profile trend)
ELEVATION IN FEET
DISTANCE IN FEET
5750
5700
5650
5600
5550
0
50
100
150
200
250
300
350
400
450
474


PROJECT


PROJECT

Staff Report to the Ogden Valley Planning Commission

Weber County Planning Division

Synopsis

Application Information

Application Request:	Consideration and action on a request for approval of the 2nd amendment to the Powder Mountain Development Agreement.
Application Type:	Legislative
Agenda Date:	Tuesday, June 21, 2022
Applicant:	Rick Everson
File Number:	ZDA 2022-01

Property Information

Approximate Address:	6965 E Powder Mountain Road, Eden
Zoning:	DRR-1 Zone
Existing Land Use:	Master Planned Ski Resort
Proposed Land Use:	Master Planned Ski Resort

Adjacent Land Use

North:	Resort	**South:**	Resort
East:	Resort	**West:**	Resort

Adjacent Land Use

Report Presenter:	Steve Burton sburton@webercountyutah.gov 801-399-8766
Report Reviewer:	RG, CE

Development History

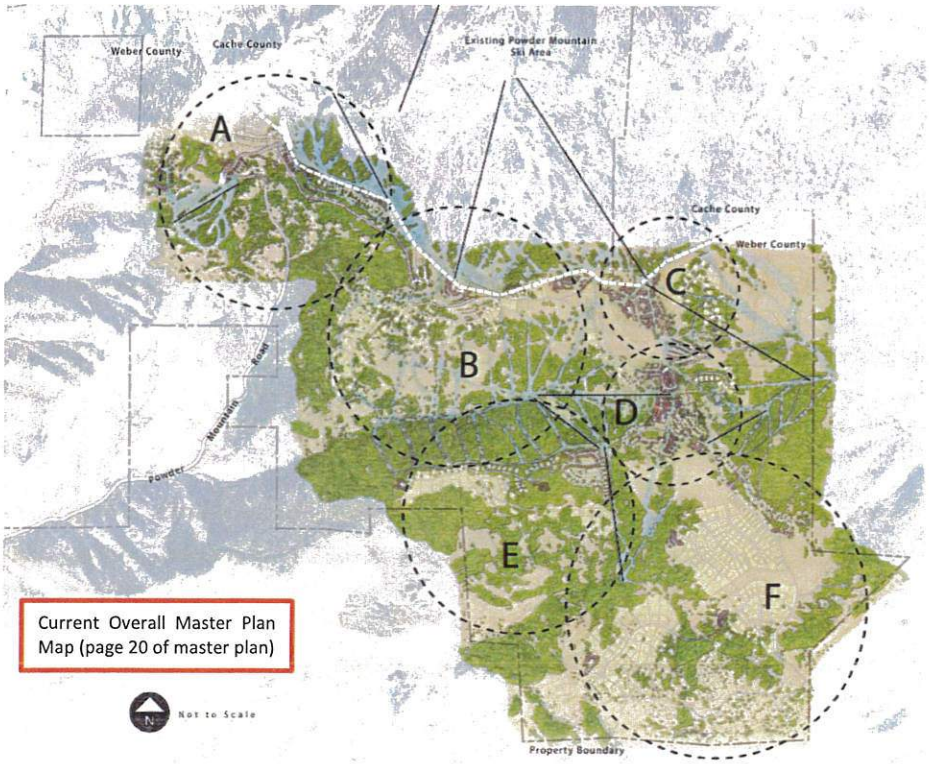
The Powder Mountain Resort was rezoned to the DRR-1 zoning on January 13, 2015, the Zoning Development Agreement was recorded on January 14, 2015.

The first amendment to the Development agreement was amended on June 26, 2019 and was recorded on July 12, 2019.

On May 5, 2022, the developer submitted a request for approval of the 2nd Amended Development Agreement. The following is a summary of the proposal and how it relates to the previous approvals and the land use code.

Summary

This proposed amendment has two parts. No density is proposed to change and no unit count methods are proposed to change. **Part I** amends the language of the development agreement contract to allow administrative changes to the Area Plans to be approved by the land use authority (A,B,C,D,E, and F).



Current Overall Master Plan Map (page 20 of master plan)

Part II amends the exhibits within the master plan document. The changes to the exhibits in the master plan begin on page 19 with a proposal to replace the 'overall land use plan'. It should be noted that the proposed changes to the overall land use plan are not major modifications, and only affect areas C and D. The changes include removing specific street locations, and replacing a small area of residential to mixed use in area D.

Page 20 includes the overall master plan map, which is proposed to be removed from the document. The developer feels that all of the other remaining maps illustrate to the county (and other readers of the master plan) what buildout will look like generally. Page 21 includes the existing phase 1 approvals, and the developer is proposing to remove the future lifts and the illustrative background from this exhibit but to keep it in the master plan document. The phase 1 approvals will need to be verified by staff, as this exhibit should have changed from 2015.

Page 22 currently contains the 'mid-mountain (area A) slope map & aerial photo' map. The developer is proposing to eliminate this map because it is identical to the map on page 23. Page 23 currently contains the 'mid-mountain master plan' map and is proposed to remain, but to be renamed 'concept development plan – Area A: Mid-mountain'. None of the land uses are proposed to change in this area from the previous approvals.

Page 24 currently contains the 'mid-mountain illustrative plan' map which is proposed to be removed from the document. Page 25 currently includes the 'ridge slope map & aerial photo' map which is proposed to be taken out. This map is identical to the map on page 26, with the exception of shaded slopes and aerial imagery. Page 26 currently includes the 'ridge master plan' which shows the general locations of the mixed use and residential uses. Page 26 is proposed to be replaced by the 'concept development plan- Area B: The Ridge' map. The uses and general locations remain the same as before.

The same changes are proposed for all remaining areas (C, D, E, and F) in the master plan document.

Commented [B1]: Get an acreage amount

Commented [B2]: Give me an acreage amount so we can quantify

Commented [B3]: I still want an overall buildout map

Commented [B4]: I still want one for each area. Also Lets call i Area A instead of mid mountain. We shouldn't call it two different names. One or the other?

Commented [B5]: If we have another map that shows slope, I'm OK combining the two onto one map as proposed.

Page 44 currently includes the 'recreation plan' map and is proposed to be replaced with the 'overall land use plan' map. The proposed rec map does show the rec elements on a legend. Page 45 currently contains the 'open space with trails plan' map and is proposed to be replaced with an identical map that shows the changed land use (slight) in area D.

Commented [B6]: Why? Leave the rec plan map.

Analysis

There are two primary benefits with the proposed changes to the master plan and development agreement text. The first is that the proposed changes will eliminate redundancies in the existing master plan document. There are several maps that are similar or identical, creating several unnecessary pages in the document.

The second benefit is the flexibility it offers the developer in platting streets and subdivisions. By not indicating exactly what each area will look like at build out, the developer would receive flexibility as development occurs. This flexibility is necessary to the developer because their development market may change over time and may call for slight changes to each development area.

Commented [B7]: They may need to provide an example

The developer's proposed changes to the text of the development agreement would solidify this flexibility and allow the land use authority the ability to approve slight and uncontested changes to each development area. Before this proposal is presented before the County Commission, language will need to be added to the text, that clarifies the land use authority has the authority to deny any proposed changes that are not determined to be slight and uncontested. The added language will also say that if a proposed change is not approved, the developer may apply for a legislative amendment to the master plan.

Commented [B8]: not disputed or challenged, slight is small in degree; inconsiderable.

Summary of Planning Commission Considerations

In reviewing a proposed development agreement, the Planning Commission and County Commission may consider, but shall not be limited to considering, the following:

1. Public impacts and benefits.
2. Adequacy in the provision of all necessary public infrastructure and services.
3. Appropriateness and adequacy of environmental protection measures.
4. Protection and enhancements of the public health, welfare, and safety, beyond what is provided by the existing land use ordinances.

Staff Recommendation

Staff recommends that the Planning Commission forward a positive recommendation to the County Commission regarding ZDA 2022-01.

This recommendation is based on the following findings:

1. The amendment is not detrimental to the public health, safety, or welfare.
2. The proposal will not deteriorate the environment of the general area so as to negatively impact surrounding properties and uses.
3. The agreement was considered by the Legislative Body, in conformance with Chapter 102-6 of the County Land Use Code.

Exhibits

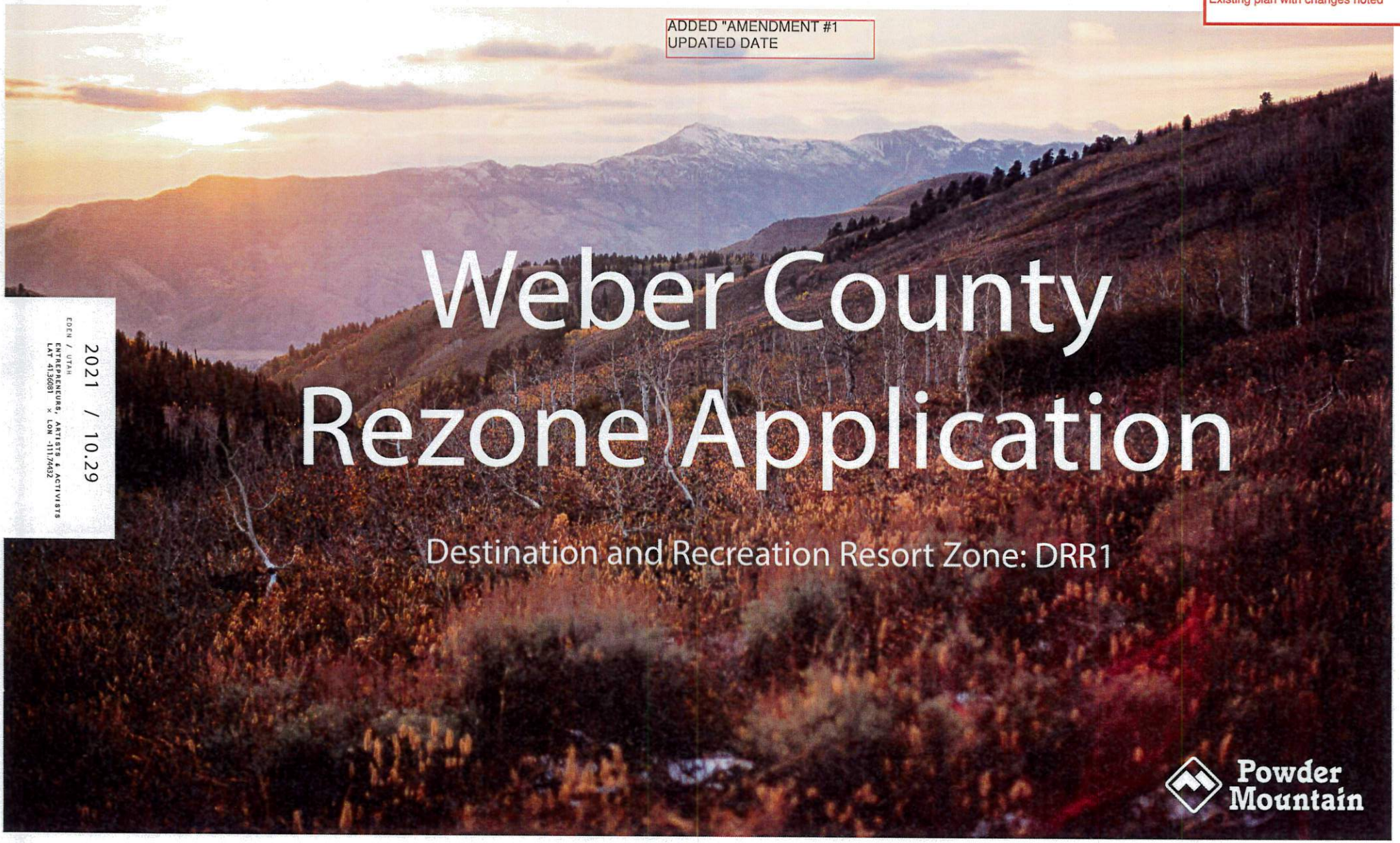
Exhibit A - Existing Master Plan document with changes noted

Exhibit B – Proposed Amended Master Plan document

Exhibit C – Proposed Amended Development Agreement

Exhibit A
Existing plan with changes noted

ADDED "AMENDMENT #1
UPDATED DATE



Weber County Rezone Application

Destination and Recreation Resort Zone: DRR1

Powder Mountain

2021 / 10.29

EDEN / UTAH

ENTREPRENEURS, ARTISTS & ACTIVISTS
LAT 41.30081 × LON -111.7432

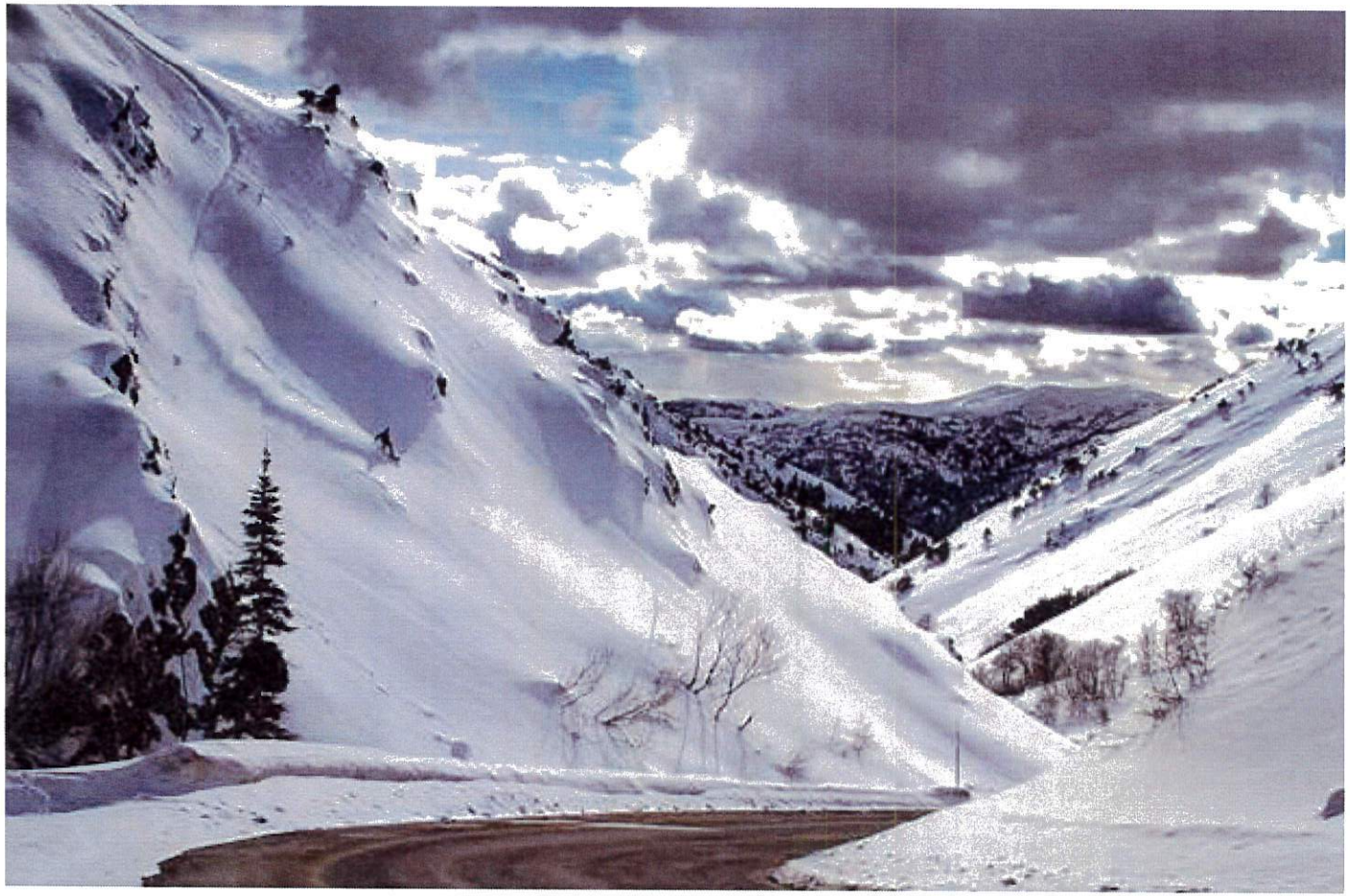
Exhibit A
Existing plan with changes noted

Table of Contents

UPDATED TO REFLECT CHANGES TO DOCUMENT CONTENT

Exhibit A
Existing plan with changes noted

The Project Team



Applicant:
SUMMIT MOUNTAIN HOLDING GROUP, L.L.C.
Attn: Paul Strange
3632 N Wolf Creek Drive
Eden, Utah 84310
801.745.2054

Land Planning
LANGVARDT DESIGN GROUP
Attn: Eric Langvardt
801.505.8090

Civil Engineering
NV5
Attn: Ryan Cathey, P.E.
5217 South State Street, Suite 200
Murray, Utah 84107
801.743.1300

Traffic Engineer
PROJECT ENGINEERING CONSULTANTS
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West Jordan, Utah 84088
801.495.4240

Fiscal Analyst
WATTS ENTERPRISES
Attn: Russ Watts
5200 S. Highland Drive
Salt Lake City, Utah 84117
801.272.7111

UPDATED ANNE WINSTON
AS SMHG CONTACT

REVISED CONTACT INFO
FOR CIVIL ENGINEER

ADDED LDG ADDRESS

Exhibit A
Existing plan with changes noted

NO CHANGE

POWDER MOUNTAIN HISTORY

Powder Mountain Resort had humble beginnings as the winter range for Frederick James Cobabe's sheep herd. Frederick, who was orphaned at age 15, moved around from family to family until he went to work for Charley Scmaltz. He tended camp for Charley's herders taking his pay in sheep until he built a herd of his own.

Frederick established a summer range in the Grand Targhee area. A prohibition on grazing was enacted when the land was incorporated into the national forest system. Between 1902 and 1948, Fred accumulated land for a summer range around Eden, Utah. Old timers say that this property was severely overgrazed by previous owners and hardly a blade of grass could be found. Fred's soil conservation practices greatly improved the vegetation and Powder Mountain now is known as one of the best watersheds in the Wasatch Mountains.

Fred's son, Alvin F. Cobabe bought the livestock company with its 8,000 acres in 1948. Just a few months later, Fred was killed in an automobile accident.

When the ranch needed a reservoir, Alvin bought heavy earth moving equipment. He delved into the earth moving business to help pay for the machinery. A career in ranching, livestock and construction, however, just did not satisfy Alvin. In 1956, at 42, he sold the companies to enroll in pre-med classes at Weber College. Although the businesses were sold, he retained the property. He graduated from the University of Utah Medical School at age 45 and returned to the upper Ogden Valley to establish a medical practice. At that time, Dr. Alvin Cobabe was the oldest person to graduate from the school.

While horseback riding with friends along Lightning Ridge in the 1950's, someone casually mentioned that the terrain would make a great ski resort. The idea rang true with Dr. Cobabe and he began to amass adjacent property adding to the thousands acquired from his father. When the resort opened on February 19, 1972, he owned 14,000 acres.

Only the Sundown lift was open during Powder Mountain's first season. The area was lit for night skiing and a ski school was established. Food was prepared on an outdoor barbecue. The Main Lodge, the Sundown Lodge and the Timberline lift were added to operations for the 72/73 season.

Dr. Alvin Cobabe, at age 88, sold Powder Mountain in 2006 to Western American Holdings. The resort remained under the same management team, led by Aleta Cobabe, daughter of Alvin, during the 2006/07 season.

In 2010, Western American Holdings finalized the Powder Mountain development agreement establishing new zoning for the Weber County portion of the property and vesting the project with 2,800 units of density.

In 2011, education entrepreneur and venture capitalist Greg Mauro had a residence in the Ogden Valley for several years. Greg had attended "Summit at Sea," a conference which is part of the flagship event series operated by Summit Series. Summit Series was founded in 2008 by entrepreneurs Elliott Bisnow, Brett Leve, Jeff Rosenthal and Jeremy Schwartz. Greg approached the Summit team with an idea: what if Summit partnered with Greg and purchased the mountain to create a home for the organization and community? What if Powder Mountain became a place with the potential to be a positive force not just in the Ogden Valley but throughout the world? Within months, Summit had moved to Eden to pursue that dream and began the process of acquiring the Powder Mountain Resort with the vision of revitalizing Powder Mountain and establishing the Summit Powder Mountain Village, as the permanent home of Summit.

In mid 2013, the group closed on the nearly 10,000 acre resort property and immediately began to implement their plan for the mountain. This included construction of a world class lodge at the top of the Hidden Lake lift, resort improvements including revamped food and beverage services as well as obtaining approvals for the first phase of the development. The first phase of the development includes 154 units approved as part of a Planned Residential Unit Development (PRUD) including residential lots ranging from 1/2 acre to 20 acres as well as the initial phase of the Summit Powder Mountain Village. The Summit Powder Mountain Village will be the keystone for the Summit Community as the center for gathering, community events, shops and the epicenter of innovation within the resort. Phase 1 plat approvals were completed in early 2014 with the first home on the mountain anticipated to be completed in summer 2015.

The additional development areas outside of the Summit Powder Mountain Village will be focused on recreation and vacation activities and will enhance the Summit Powder Mountain Village by bringing additional visitors to the community. These areas will add to the vibrant community center of the Summit Powder Mountain Village.

TIMELINE

1971-72 Season
Powder Mountain opened February 19 with Sundown Lift.
Ski School began.

1972-73 Season
Main Lodge opened.
Sundown Lodge opened.
Timberline Lift opened.

1975-76 Season
Hidden Lake Lift added.
1981-82 Season
Shuttle service for employees and for Powder Country started.
1984-85 Season
Powder Mountain was the first Utah resort to allow snowboarding.

1986-87 Season
Hidden Lake Lodge opened.

1989-90 Season
Columbine Inn opened with two condominiums and five hotel rooms.

1990-91 Season
Diamond Peaks Heli-skiing started providing service between James Peak and at the Hidden Lake parking lot.

1994-95 Season
Sunrise Lift opened.

1999-2000 Season
Paradise Lift, a quad, opened up an additional 1300 acres of lift accessed terrain.
Cat skiing moved to Lightning Ridge accessing an additional 700 acres.
Powder Mountain became resort with the most ski able terrain in America.

2001-02 Season
Rails added at the Sundown Lift area.
Terrain Park added off Hidden Lake run.

2006-07
High-speed quad replaced the double chair lift at Hidden Lake.
The snowmobile tow at Lightning Ridge was replaced with snow cat with people mover.
Powder Mountain was sold to Western American Holdings.

2007-08
A snow kiting area was designated and Powder Mountain become one of the first, if not the first, resort in the US to offer a snow kite only pass.
The Snow cat Powder Safari began in January 2008.

2012
Summit relocates its operations to Eden, Utah from Malibu, California.
Summit Mountain Holding Group, L.L.C. ("SMHG") begins the acquisition process to acquire the approximate 10,000 acre resort.
Sky Lodge construction begins.
SMHG assumes Mountain operations for the 2012/2013 ski season.

2013
The Sky Lodge at Hidden Lake is completed.
Summit holds a Founders weekend on the Mountain to introduce the Summit community to the Phase 1 development.
Summit Outside is held over 3 days at the future Village site.
Summit Powder Mountain Village phase 1 PRUD of 154 units is approved.
SMHG closes on Powder Mountain's 10,000 acres.

2014
Phase 1 plats approved for 154 units.

PURPOSE OF THE REZONE APPLICATION

To aid in the creation of Powder Mountain as the entrepreneurial center for its unique community and to maintain and advance Powder Mountain Resort as a destination four-season resort, the process of creating a Master Plan for the approximately 6,160 acres in the Powder Mountain area began in 2012. The Master Plan contained within this document that is a result of months of studies, programming, visioning and processing is as much about where development has not been placed as it is where development has been placed. The Master Plan provided herein establishes the foundation for Powder Mountain to create an authentic mountain destination with varied vibrant neighborhoods clustered throughout the 6,240 acres within Weber County with the Summit Powder Mountain Village as the center of this Summit community. Additional development areas surround the Summit Powder Mountain Village such as Mid-Mountain, The Ridge, Earl's Village, Gersten and the Meadow provide the community with varied neighborhoods and on mountain experiences with appropriately scaled developments and important open space preservation.

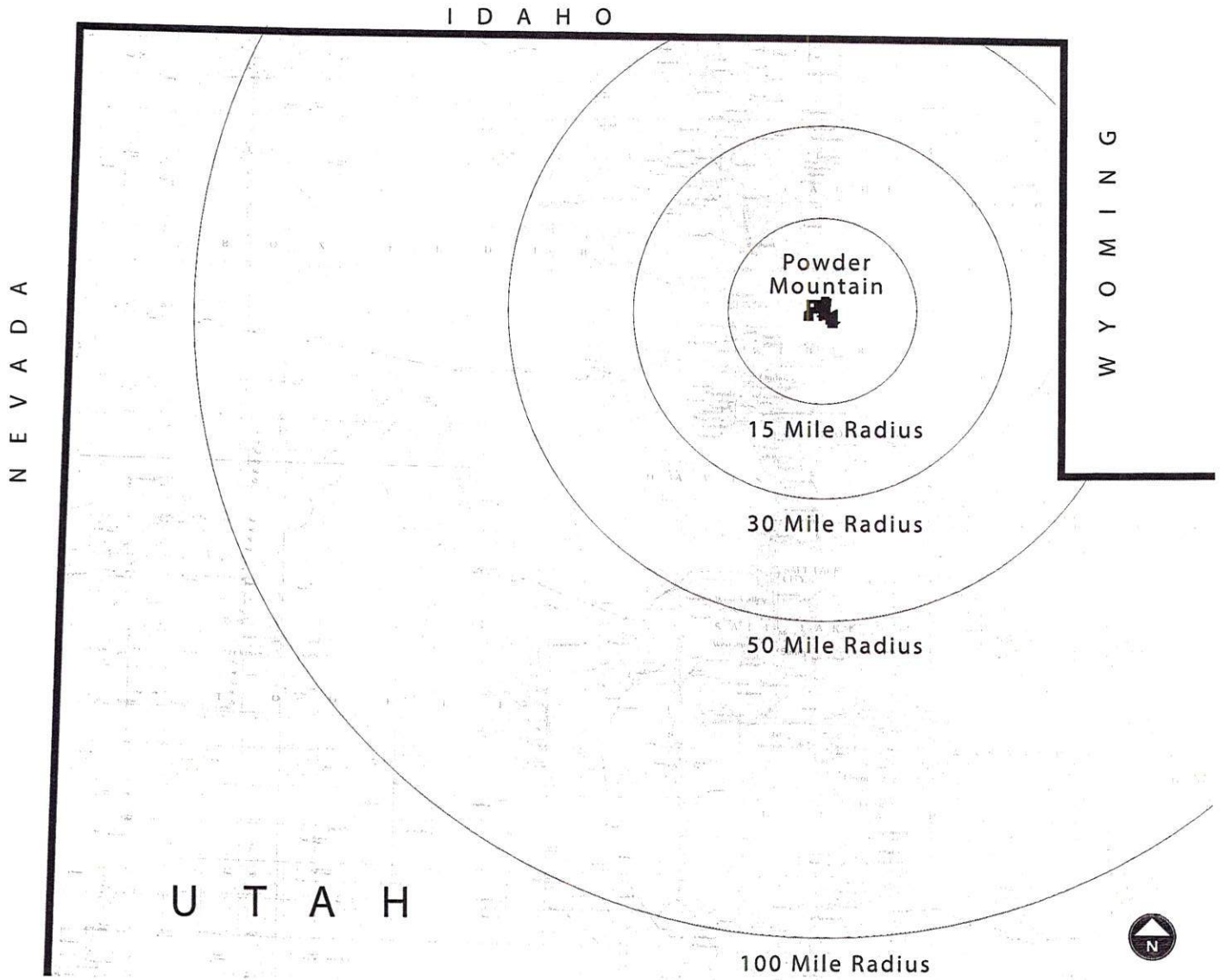
The Master Plan process began with substantial base mapping, site observations and design development studies to ensure the resort will be one of the most sensitively designed master planned projects in the West as well as one of the most unique and diverse. This process included comprehensive development of slope maps, existing vegetation mapping, geotechnical investigation, avalanche zones, wind and solar aspect studies, access feasibility, ski terrain and resort connectivity, wildlife corridors, existing trails, viewsheds (into and out of the property) and open space preservation, all of which are incorporated within this application.

The Applicant requests a zoning change for the approximately 6,160 acre Powder Mountain project area per the Ogden Valley Destination and Recreation Resort Ordinance (DRR1) passed and signed on August 18, 2009 (Ord. 2009-16). This ordinance was created to enable quality resort development in appropriate locations within Weber County. Rezoning the property to a Destination and Recreation Resort will allow Powder Mountain to realize the vision as one of the world's most unique mountain destinations combining an enhanced mountain experience with a truly cutting edge master planned community.

Exhibit A
Existing plan with changes noted

Location Map

NO CHANGE



Powder Mountain is located in Northeastern Utah just north and east of the City of Ogden. The resort property is located in both Cache and Weber Counties above the Ogden Valley and the communities of Eden, Huntsville and Liberty. The property is approximately 55 miles from Salt Lake City International Airport. It is accessed from the south by Highway 158 from the Ogden Valley.

Driving Distance from notable Locations to Powder Mountain:

Snowbasin Resort	22 Miles
Ogden	27 Miles
Layton	36 Miles
Salt Lake City	60 Miles
Park City	80 Miles
Provo	101 Miles
Boise	328 Miles
St. George	360 Miles
Cheyenne	441 Miles
Las Vegas	480 Miles
Denver	540 Miles
Reno	570 Miles

Exhibit A
Existing plan with changes noted

NO CHANGE

PROCESS

This Destination and Recreation Resort Rezone (DRR-1) application contains all documents as required and requested by Weber County in order to obtain zoning and entitlements for the Powder Mountain Property identified herein. This application has been prepared in accordance with the Weber County Destination and Recreation Resort Ordinance (DRR-1) and thru close coordination with the Weber County Planning Department.

This application and subsequent approval will allow Powder Mountain to continue with the development plans outlined in this document and to build upon their Phase 1 approvals and development progress with more flexibility in design and density placement. The information within this document has been compiled in accordance with the application requirements outlined in the Ogden Valley Destination and Recreation Resort Ordinance.

Upon acceptance of the rezone application documents, the applicant is prepared to present the plan to the Ogden Valley Planning Commission (OVPC) as necessary to receive Commission and Public comments on the rezone application. Working with Planning staff, the applicant will fulfill all necessary requests for approvals. Following the OVPC findings, a public hearing(s) will be held with the County Commission to obtain full rezone approvals.

WHY PRESENT ZONING SHOULD BE CHANGED

Powder Mountain Resort has been a popular ski mountain destination in northern Utah and Weber County and is well known within Utah as a mountain with abundant terrain and great value for skier guests. This all despite missing key elements for a successful destination resort, such as high quality and diverse accommodations, retreats, top notch food and beverage, ski lifts, lodges, retail and other amenities. The current zoning on the property allows for adequate development of the mountain but is not fully appropriate to allow Powder Mountain to maximize its potential as a unique mountain destination. Rezoning the property to Destination and Recreation Resort will enable the land owner to create an extraordinary recreation and residential experience while preserving and promoting the goals and objectives identified within the Ogden Valley General Plan. The rezone will enable new and yet traditional resort development planning strategies to be implemented lifting Powder Mountain to the front of the mountain community, ski resort and retreats industry while still preserving abundant open spaces and contributing to the surrounding community's long term well being.

PUBLIC INTEREST

The Master Plan for Powder Mountain Resort will provide a diverse and unique mountain experience for both visitors and residents. The Master Plan provides for both residential communities and recreational properties within the project. The new commercial developments supporting the proposed residential, hotel(s), recreational uses and open spaces at Powder Mountain will provide additional tax revenues to Weber County. These new uses will give Powder Mountain a sustainable development base from which to grow and will benefit the community as a whole while continuing the recreational focus as identified by the County.

SUBSTANTIAL PUBLIC BENEFITS

The rezone will allow the development to move forward with development plans that will provide the following Substantial Public Benefits:

The process requires the development of a full Master Plan for the Rezone area. This will provide the public with the vision for the resort and will insure public input is provided as part of the rezone approval process that would otherwise not be available under the current zoning approval process and development applications.

Substantial agency review of the project is required as part of the DRR1 rezone application. This review is expansive and thorough and provides for a much broader scope of review than if the project was submitted in piecemeal fashion under current zoning. This includes reviews by:

- Weber County (Assessor, Economic Development, Engineering, Planning, School District, Sheriff, Treasurer)
- Utah Department of Transportation
- Utah Division of Wildlife Resources
- US Forest Service
- Weber Pathways
- Rocky Mountain Power
- Powder Mountain Sewer and Water

Substantial Open Space will be guaranteed with the location of the open space identified within the Master Plan and with a minimum of 30% of the adjusted gross acreage being provided as conservation open space.

The rezone adds approximately 1,940 acres of land to the previous development application approval and proposes to strip all development rights from this additional property while preserving the area as open space. Much of this property includes the Regional trail to Wolf Canyon Trailhead.

All proposed recreational amenities will be publicly accessible integrating the new community with those existing and future communities within Weber County. This includes the implementation of important public trail links to and thru the resort as identified on the Open Space and Trails Plan.

The rezone allows the development to further cluster development areas preserving more open spaces thru the flexibility of the rezone and its allowed uses, building heights and overall design flexibility.

Establishes Design Guidelines and Sustainability practices within the rezone application far superior to current zone development requirements minimizing the overall impact of the community as a whole.

Establishes traffic mitigation practices with the rezone application reducing the overall traffic impacts to the existing transportation system and existing community that far exceed current zone requirements. These proposed mitigation practices include:

- Providing preferred parking in the day skier lots for vehicles with three or more occupants. To promote reduced vehicle emissions and a healthier environment, preferred parking could also be extended to hybrid vehicles and other low-emissions vehicles.
- Implement the use of alternative fuel shuttles for the employee/ skier transit services.
- Provide transit passes to all employees not housed on-site and require the employees to use them to access the resort.

CHANGES TO THE GENERAL AREA SINCE THE ADOPTION OF THE GENERAL PLAN

The Powder Mountain Resort area is recognized as a recreation/ resort area that has potential for further development that would support and enhance the existing recreational components within the resort providing a viable long term project. The Destination and Recreation Resort Ordinance was written to allow resort development in appropriate locations. Since the adoption of the General Plan, the Powder Mountain Resort and adjoining undeveloped acreage within Weber County was purchased by Summit Mountain Holding Group. This group aims to create a unique destination community with a vision for a diverse mountain village and associated mountain neighborhoods that would provide economic stability for the existing resort while also providing substantial expansion and diversity of this amenity. This change in ownership since the adoption of the General Plan marks a substantial shift in project vision with enhanced traffic mitigation and sustainability requirements as outlined within this document. The County General Plan supports and promotes appropriate resort facilities as a major element within the County. Powder Mountain is an ideal location for responsible, well balanced and sustainable resort development.

PROMOTE HEALTH, SAFETY AND WELFARE TO WEBER COUNTY

The Master Plan as proposed within this rezone document for Powder Mountain promotes the health, safety and welfare of Weber County residents by creating a diverse year-round resort. This diversity will provide stability and long term benefits to Weber County and in particular the Ogden Valley while also preserving significant open space within the project.

The project will provide long term economic benefits as outlined in the Benefits Analysis ensuring the County and its residents are not negatively impacted fiscally.

The Master Plan includes important trail connections between neighborhoods and within the surrounding communities of Eden and Liberty through the regional trail links that have been extended into and thru the Resort property. These trail connections link the Resort to the Valley floor providing access to important recreational amenities while limiting impacts to existing communities and residential neighborhoods continuing the important community access to the vast outdoors in Weber County.

Traffic mitigation plans will be implemented to ensure that all new development impacts to existing and future roadways are minimized providing safe a appropriate access to the mountain while mitigating those impacts to existing and future neighborhoods in the Valley.

The development areas within the project were designed with respect to the land attributes preserving sensitive lands and stream corridors and to avoid sky lining. The importance of economic, environmental, community and aesthetic benefits were taken into consideration to ensure a quality destination that provides benefits to the owners, Weber County and the community.

Exhibit A
Existing plan with changes noted

Approval Criteria

NO CHANGE

As outlined in Chapter 35 of the Weber County code (35-3), the project meets the approval criteria as follows:

A. The proposed Resort can be developed in a manner that will not substantially degrade natural/ecological resources or sensitive lands as identified in Chapter 43, Ogden Valley Lands Overlay District, or the Weber County Zoning Ordinance.

• The Sensitive Lands Areas as outlined in Chapter 43 of the Weber County Code are provided on pages 13-15 with the Powder Mountain project boundary indicated. The Wildlife Habitat exhibit shows that the Powder Mountain project area is generally outside the important wildlife habitat area with the only interface occurring within the Southwest portion of the property and involving the existing highway access to the Resort. No development is proposed within this important wildlife habitat area.

While there are stream corridors within the project area, the primary area of potential impact includes the Powder Mountain Road and Wolf Creek interface. The Road exists and all impacts have previously been mitigated as this roadway serves as the existing access to the Resort. No other stream corridors exist within close proximity to any proposed development area within the rezone Master Plan.

Due to Powder Mountain's proximity above the valley floor, no scenic roadway impacts exist as defined within these exhibits.

B. A professional study has provided substantial evidence determining that the proposed Powder Mountain Resort is viable and contributes to the surrounding community's economic well being. A fiscal impact and cost benefit analysis is attached as Exhibit A. This study was conducted by Bonneville Research out of Salt Lake City, Utah. Highlights of the market, economic and fiscal impact are as follows:

MARKET FEASIBILITY

Utah's mountain resorts are provided with unique market advantages due to their close proximity to the Salt Lake International Airport, large and well maintained local highway and road infrastructure, a large local skier and recreational base in close proximity to resorts and typically abundant snowfall that is considered some of the best in the world.

The State of Utah is also progressive in its ski and outdoor recreational marketing promoting Utah as a recreational destination and prioritizing it as one of the major cornerstones of long term revenue generators for the state.

With the region established as a well developed destination for both summer and winter visitors, the Ogden Valley and Powder Mountain are poised to maintain a consistent rate of growth within these recreational and residential markets. With the proximity to the Salt Lake International Airport and the continued exposure to the area that is spearheaded by Park City and Deer Valley communities among others, the opportunity to capture first and second home buyers from regions throughout the west remains strong. The Summit community and their unique gathering of entrepreneurial guests will also bring together this love for the outdoors with the new and local communities creating a unique mountain destination.

The Powder Mountain Resort will continue to become more and more recognized by a greater audience as already seen with the implementation of the Phase 1 infrastructure and momentum will only continue to grow as the project develops on the mountain.

ECONOMIC IMPACT

Total economic impacts of the Powder Mountain project are anticipated to continually increase as the project builds out with the addition of hotels, corporate and educational retreats, expanded and new recreational amenities and the synergy of the Summit Powder Mountain Village grows. After full build out, ongoing economic impacts are projected to provide continued positive effects as follows:

Direct annual output is projected as $60 million, and total annual output (including direct output plus secondary or "multiplier" impacts) is projected at $112 million.

Direct jobs created by the development are projected at 1,623 at full build out.

Direct labor income is projected at $24 million annually.

FISCAL IMPACT

The proposed Powder Mountain project is identified to provide a substantially positive fiscal impact for Weber County.

After project build out, Powder Mountain is projected to generate approximately $55 million in annual taxable revenue. The Powder Mountain project is anticipated to be one of the highest valued resort projects in the west with these values creating the very positive budgetary impact. Most residential units will be second homeowner classification while the assessment of most residential units will be at full market value. This will result in high per capita spending and resulting sales tax revenues and a moderate cost of service profile which is consistent with similar projects throughout western resorts.

Other growth-sensitive Weber County funds are projected to experience positive fund balances throughout the construction period of the project and after build out providing a broad fiscal benefit to the County. (See attached Bonneville Research Study)

C. A professional traffic study has explored and provided substantial evidence determining that proposed traffic mitigation plans will prevent transportation corridors, serving the Project, from diminishing below an acceptable Level of Service.

The Transportation Element study prepared by PEC out of Salt Lake City is attached as Exhibit 2.

Overall the road network can and will provide appropriate access to and from Powder Mountain, with some improvements required for mitigation as the project is built out.

D. The natural and developed recreational amenities, provided by the Resort, shall constitute a primary attraction and provide an exceptional recreational experience by enhancing quality public recreational opportunities.

Powder Mountain Resort is currently a well established ski resort. The proposed Master Plan is designed to enhance the visitor experience with expanded recreational services, new and diverse overnight accommodations, varied retail shops and services including restaurants, a mountain village main street, and varied destination attractions. Publicly accessible recreation facilities and activities are planned throughout the project area to establish Powder Mountain as a year-round destination. These activities include walking/hiking trails, biking trails including mountain biking and cyclocross trails, horseback riding, naturalists tours, camping, rental of non-occupied units and other outdoor special events.

E. The proposed Seasonal Workforce Housing Plan will provide a socially, economically and environmentally responsible development.

The seasonal workforce housing plan is provided on page 43. At full project build-out, it is estimated that Powder Mountain Resort will generate 1,623 full-time equivalent employees and 984 workforce housing units.

As calculated in the table on Page 43, Powder Mountain Resort will provide at least 98 seasonal workforce housing units.

F. Public safety services are and/or will be feasible and available to serve the Resort in a manner that is acceptable to the County Commission.

Throughout the development of the Phase 1 plans as well as the DRR1 Master Plan development, The development team has continually met with representatives from the Sheriff's office, Fire Department and Emergency Medical Service providers gathering input to the plans and incorporating that input into this application. The proposed Master Plan reflects the input received from these departments with regard to necessary Emergency Services. Per the discussions with these public safety providers, Powder Mountain will provide a facility to house both the Sheriff and Fire Department services on mountain. A preliminary parcel has been identified within Summit Powder Mountain Village and will be provided at the time the services are deemed necessary by the emergency service providers. This parcel will be integrated within the Resort in a manner that fits the development setting in which it is located but the scope of services provided will be modeled after the Huntsville Station as per the discussions with the emergency providers. Feasibility letters from both the Fire Department and Sheriff's Department are attached on Page 47.

Exhibit A
Existing plan with changes noted

Compliance with the General Plan

NO CHANGE

The proposed Master Plan for Powder Mountain presented in this application is in compliance with the Ogden Valley General Plan Goals and Objectives as outlined in the Ogden Valley General Plan as follows:

3.01 VISION: PROTECT THE NATURAL BEAUTY AND NATURAL RESOURCES OF THE VALLEY

Goal: Protect Air Quality and Water Resources

Powder Mountain maintains a strong commitment to Weber County's goal of preserving the natural beauty and natural resources of the Ogden Valley. The Master Plan was developed with the ethos that all development must be light on the land and all development impacts should be minimized or mitigated to the greatest extent possible providing a balance between the built and natural environments. Measures to protect the natural resources and beauty of the Ogden Valley during and after both the planning and construction stages include:

Clustering all development within areas that allow for minimized development impacts thus maximizing significant and important open spaces.

Much of the development is centered around "village" infrastructure allowing for walkable trips or reduced traffic impacts and limiting the size of the project "footprint" on the mountain.

A comprehensive transportation plan will be implemented providing resort shuttles from the Valley via Park and Ride lots, shuttles within the resort property and the provisions of essential on-mountain services reducing off-mountain trips all of which will help protect the Valley's air quality thru the reduced trip counts.

Water quality controls will be implemented on the following levels.

Water

As awareness of the importance of conservation of resources and implementation of sustainable practices grows, Powder Mountain has a goal to introduce a higher level of implementation than almost any project yet envisioned in Utah. Powder Mountain is using an integrated water management strategy in an effort to develop a truly sustainable project.

Groundwater

Powder Mountain understands the value of groundwater as an essential resource. To minimize impacts to groundwater resources, Powder Mountain is adopting water conservation and efficiency requirements for both indoor and outdoor water use that will make the project a leader in the State of Utah.

Surface Water

Powder Mountain will also focus on the protection of surface water by limiting grading and preparing erosion control plans and Stormwater Pollution Prevention Plans (SWPPPs) that will incorporate the appropriate best management practices to protect drainages, wetlands and surface waters.

Water Conservation

Powder Mountain's Design Guidelines, attached as exhibit 3 within this application, have been written to ensure that water is conserved both indoors and outdoors. The Guidelines require the use of low flow appliances and fixtures that are expected to reduce per person indoor water use to less than half of the State of Utah's design code requirement. In addition, Powder Mountain is restricting the total landscape area of each unit that can be irrigated as well as requiring weather based irrigation controllers, native and low water use plant types and limiting grading areas to protect natural areas.

Goal: Protect Open Space and Sensitive Lands

The most substantial and important portion of the Master Plan is what is not being developed. The Master Plan was sensitive to not only identified steep slopes, wetlands, stream corridors and drainages but it also factored in visually sensitive lands, important wildlife corridors, recreational open spaces and open space buffers. Additionally and as part of this application requirement, Weber County's sensitive land maps were overlaid on the Master Plan to ensure that all proposed development does not occur on areas identified as important wildlife habitats or within stream corridors and scenic road buffers. See Pages 13-15.

Goal: Preserve Wildlife and Wildlife Habitat

As shown on the Sensitive Lands Exhibit on Page 13, the proposed development boundary does overlap upon important wildlife habitat areas as designated by Weber County. However, the detailed Master Plan does not propose any development within this important wildlife area and in fact creates a substantial buffer to this area. However, it is recognized that wildlife can be found throughout the property and providing well placed wildlife corridors will allow all proposed development to work in harmony with the natural environment. The master plan for Powder Mountain proposes clustered development parcels on only 18 percent of the gross acres located in Weber County. The remaining 82 percent is available for wildlife habitat and open space.

3.02 VISION: MAINTAIN THE VALLEY'S RURAL ATMOSPHERE AND RURAL LIFESTYLE

Goal: Promote a Sense of Pride in the Valley's History and Heritage

There are no identified cultural and/or historical resources within the Powder Mountain project area. The applicant is committed to preserving the existing ski area at Powder Mountain as a community resource. Powder Mountain is committed to maintaining the wide open and rustic nature of the resort while providing tasteful upgrades and updates to the facilities. We are dedicated to appropriately addressing the elements that make the resort special and enhancing those elements.

Goal: Require that Development be Compatible with the Valley's Rural Character and Natural Setting:

In order to ensure that development is compatible with the Valley's rural character and natural setting, a set of Design Guidelines has been established that will govern the style and characteristics of buildings, landscaping, signage, etc. This style pulls from the Valley's architectural vernacular, utilizes timeless forms and materials and requires structures to be placed sensitively to become part of the landscape, not dominate the landscape.

Goal: Require that Development and Community Services Conform with the Valley's Natural Resource Capabilities

Throughout the development process the Applicant will plan and provide for adequate infrastructure to support all proposed development. This will include calculated phasing of units, concurrency measures for water and sewer as well as establish required funding mechanisms for required development improvements.

Goal: Provide Adequate Emergency and Medical Services

Substantial coordination with the County Emergency Services Departments has been implemented in the Master Plan. The Emergency Services Plan on page 47 of this application outlines the discussions with the Sheriff and Fire Marshall as well as letters of feasibility from each. Emergency and medical services will be phased appropriately and adequately as development occurs and as required by these Emergency Service Providers.

Goal: Promote Agricultural Land

Due to the proximity of the project property at elevations well above the valley floor as well as the steep slopes and recreational focus of the existing mountain property, the project does not currently contain an abundance of agricultural uses and therefore is not conducive to provide agricultural uses in the proposed plan for the project.

Goal: Recognize and Respect Private Property Rights

The proposed Master Plan is fully located on private property owned by the applicant and does not negatively impact any adjacent private land.

Goal: Facilitate the Smooth Flow of Traffic In and Out of the Valley

A comprehensive transportation study has been prepared by Project Engineering Consultants (PEC) and is included with this application as Exhibit 2. The report studies the transportation impacts anticipated to be associated with the proposed Master Plan, provides an analysis of phased development steps to identify what and when any necessary roadway improvements would be needed, and identifies any traffic mitigation measures to be utilized by the project to ensure the existing and future road systems continue to provide adequate operations throughout the valley as the development progresses ti build out.

Goal: Enhance Quality Recreational Opportunities

The Recreation Plan and the Open Space and Trails Plan outline the recreation opportunities that are proposed for Powder Mountain. These plans highlight the additional recreational amenities that may be provided in addition to those that currently existing within the project and as part of the existing ski area. The trails plan highlights trail linkages to the Ogden Valley via Gertsen Canyon and the existing Gertsen Canyon trail and also provides for regional trial connections both east and west thru the project while also providing a substantial and diverse trail network internal to the resort.

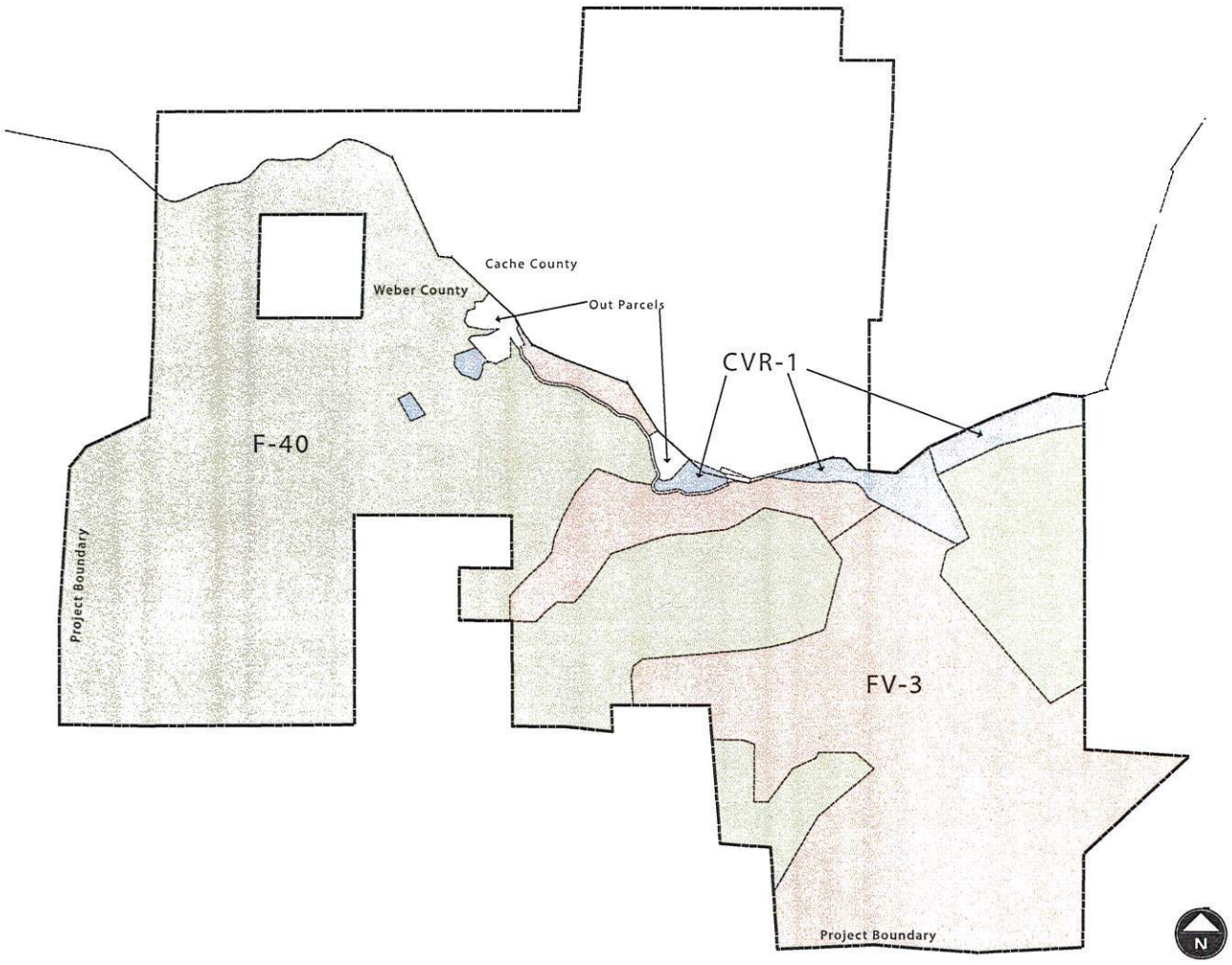
In addition to skiing, snowboarding, snowshoeing, etc., which are already enjoyed at Powder Mountain, the recreation facilities plan expands the recreation opportunities to include non-skiing activities, such as hiking, mountain biking, glamping, ice skating, fishing, as well as facilities for special events and equestrian experiences.

Exhibit A
Existing plan with changes noted

Existing Zoning

NO CHANGE

The Powder Mountain property located in Weber County is currently zoned Commercial Valley Resort Recreation Zone (CVR-1), Forest Valley (FV-3) and Forest Zone (F-40).



CVR-1 - Commercial Valley Resort Recreation Zone
The purpose of this zone is to provide locations in the Ogden Valley and at major recreation resort areas, where service facilities and goods normally required by the public in the pursuit of general recreation activities can be obtained.

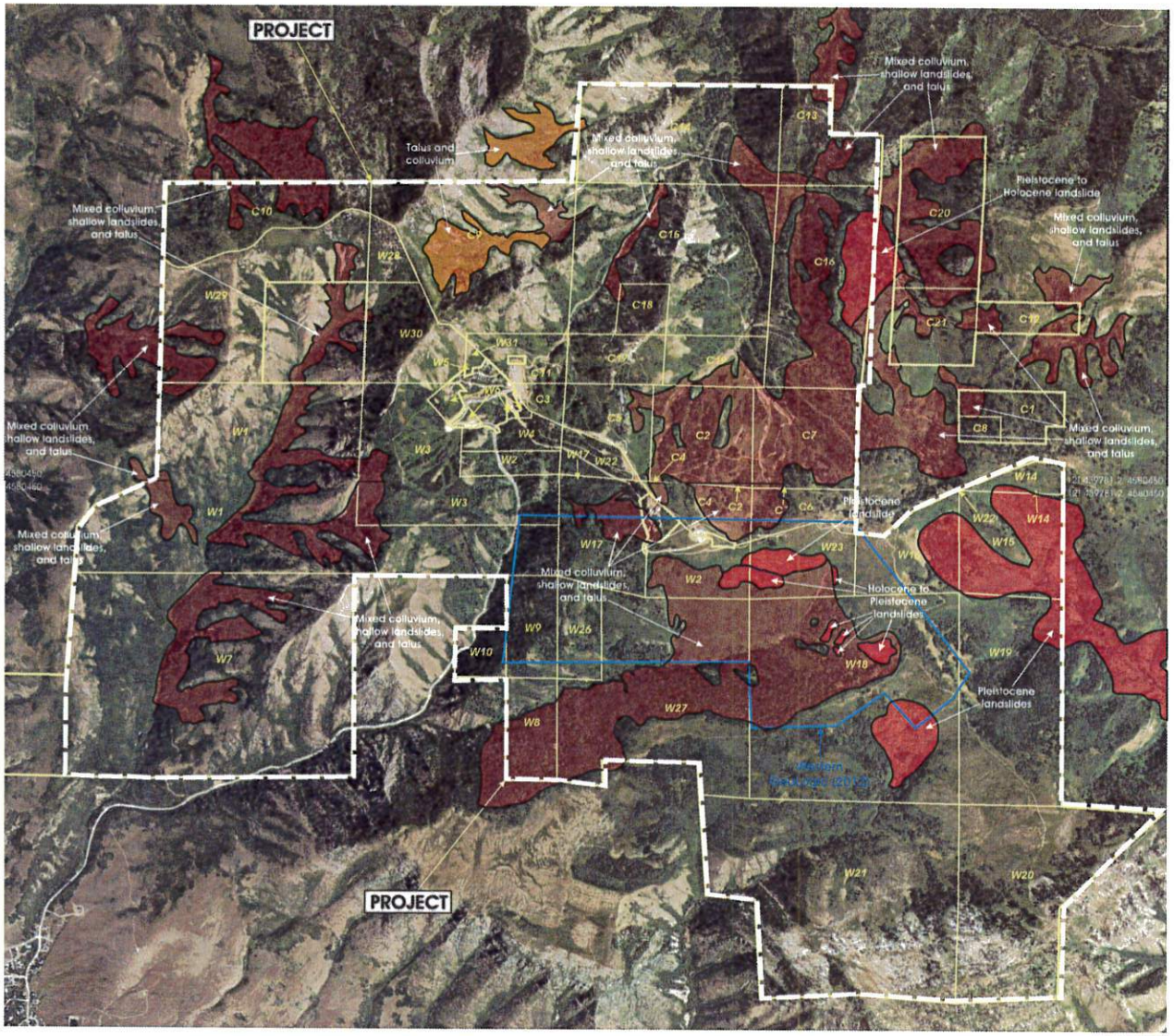
FV-3 - Forest Valley Zone
The purpose of the Forest Valley Zone is to provide area for residential development in a forest setting at a low density, as well as to protect as much as possible the naturalistic environment of the development.

Forest Zone - F-40
The intent of the Forest Zones is to protect and preserve the natural environment of those areas of the County that are characterized by mountainous, forest or naturalistic land, and to permit development compatible to the preservation of these areas.

Exhibit A
Existing plan with changes noted

Geologic Hazards

NO CHANGE



The Geologic Hazards map identifies surficial geologic conditions at the Project and identifies potential risk from geologic hazards. This investigation is intended to:

(1) provide preliminary geologic information and assessment of geologic conditions;
(2) identify potential geologic hazards that may be present and qualitatively assess their risks to the intended project; and
(3) provide recommendations for additional site- and hazard-specific studies or mitigation measures as may be needed based on our findings.

Given the large Project size and scale of the mapping included with this investigation, small variations in surficial conditions and geologic hazards risk may occur and should be expected.

This report is intended to be a reconnaissance-level tool to assist with Project planning, and reduce and minimize impacts from high-risk geologic hazards.

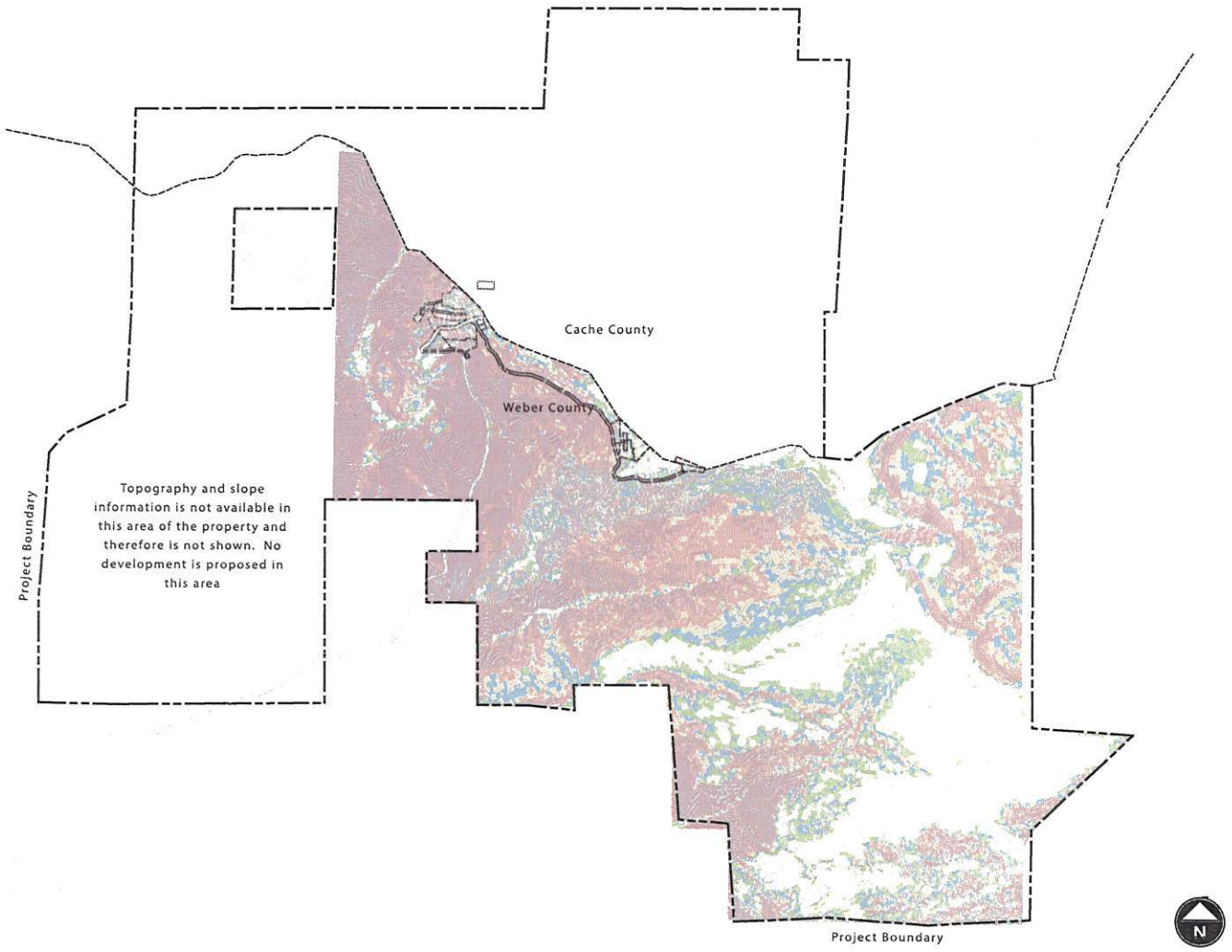
The known geologic conditions are explained in greater detail in the preliminary Geologic Hazard Evaluation report that is included as Exhibit 1 of this submission.

Exhibit A
Existing plan with changes noted

Existing Topography/Slope

NO CHANGE

The Slope Analysis illustrates that much of the Powder Mountain property contains slopes most suitable to ski terrain. The projects topography does vary greatly from flat meadows and ridges to steep ski terrain and mountain slopes. The Master Plan was developed with sensitivity to placing development on steep slopes with the majority of the project density clustered around the more gentle meadows and saddles that exist throughout the development.



Slope Legend

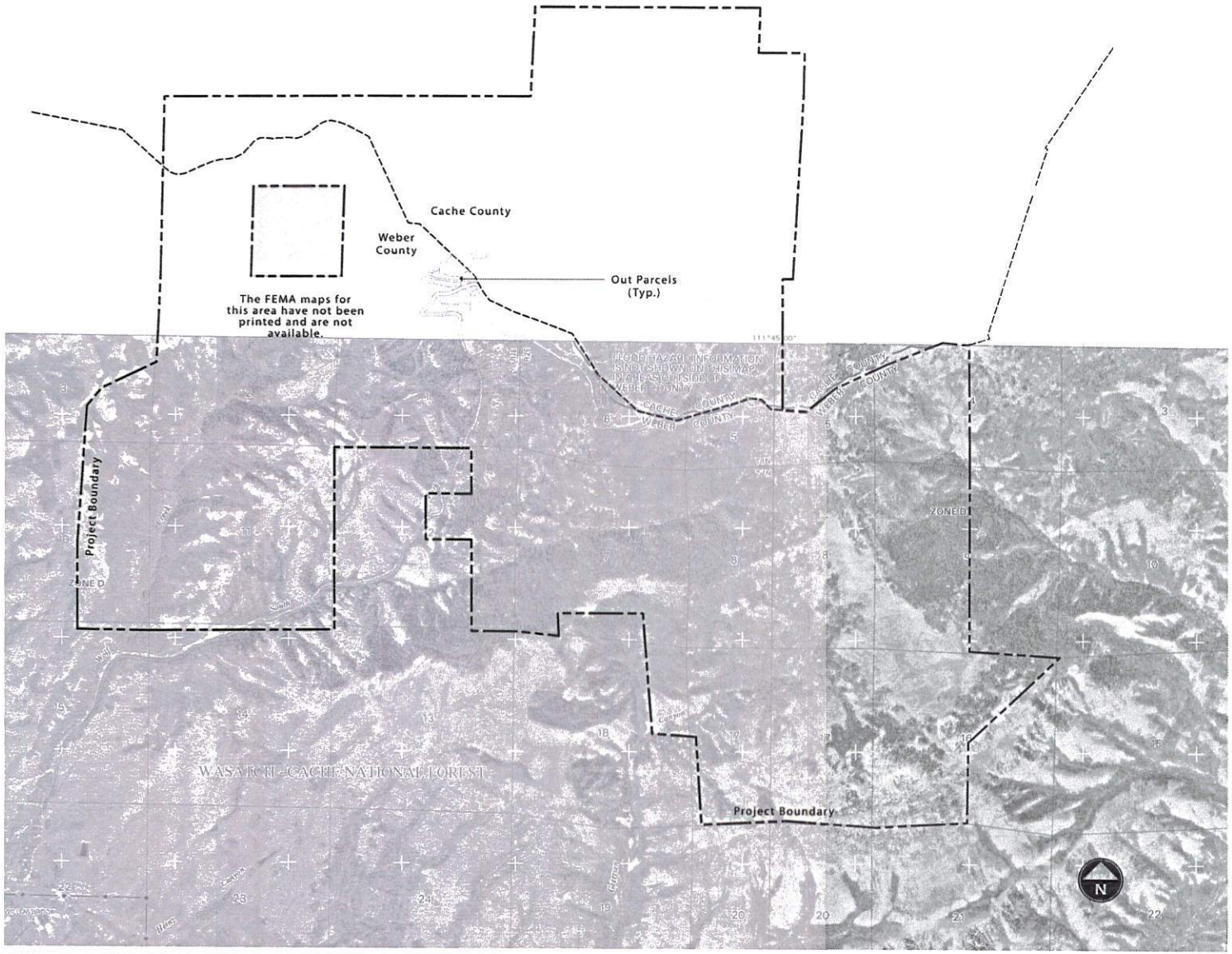
- 0%-15%
- 15%-20%
- 20%-25%
- 25%-30%
- 30%-40%
- 40% & Above

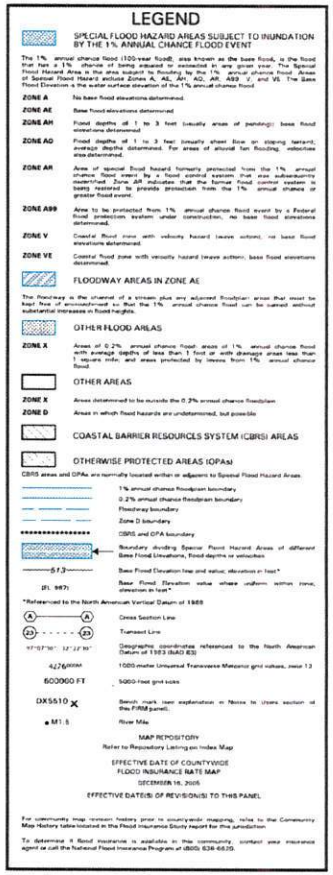
Exhibit A
Existing plan with changes noted

Floodplain Map

NO CHANGE

The FEMA Flood Insurance Rate Maps for Weber County illustrate that all areas mapped within the Powder Mountain project boundaries are identified as Zone D. As defined, Zone D area flood hazards are undetermined. The Powder Mountain property is generally located at an elevation above flood hazards due to its proximity to the top of the drainages within the area.




LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A — No base flood elevations determined.
ZONE AE — Base flood elevations determined.
ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR — Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
ZONE A99 — Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.
ZONE V — Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
ZONE VE — Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary
0.2% annual chance floodplain boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
513 — Base Flood Elevation line and value; elevation in feet*
(EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*
*Referenced to the North American Vertical Datum of 1988
A — A — Cross Section Line
23 — 23 — Transect Line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
4276000 — 1000-meter Universal Transverse Mercator grid values, zone 12
600000 FT — 5000-foot grid ticks
DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5 — River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
DECEMBER 16, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

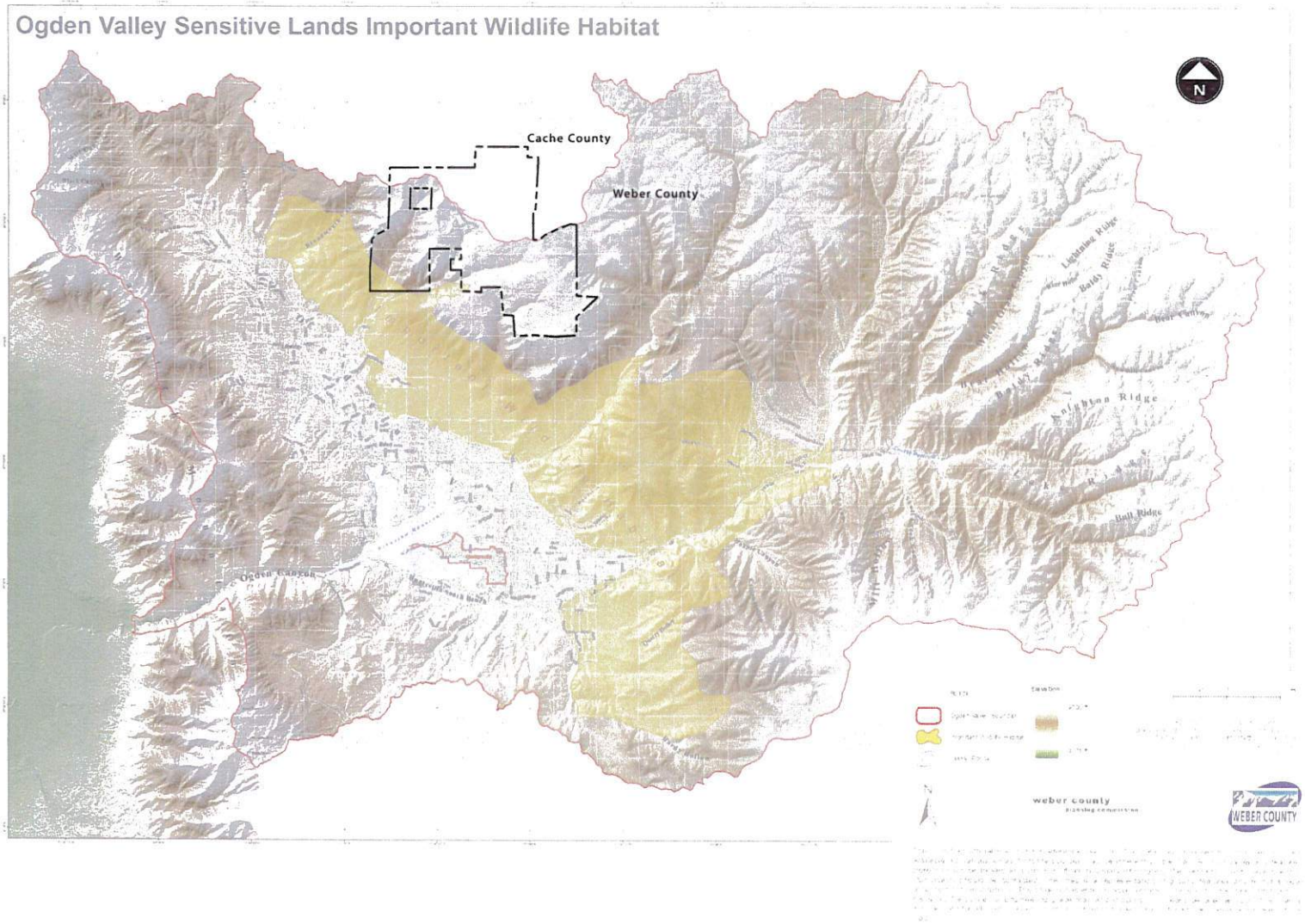
For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

Exhibit A
Existing plan with changes noted

Sensitive Land Areas: Wildlife Habitat

NO CHANGE

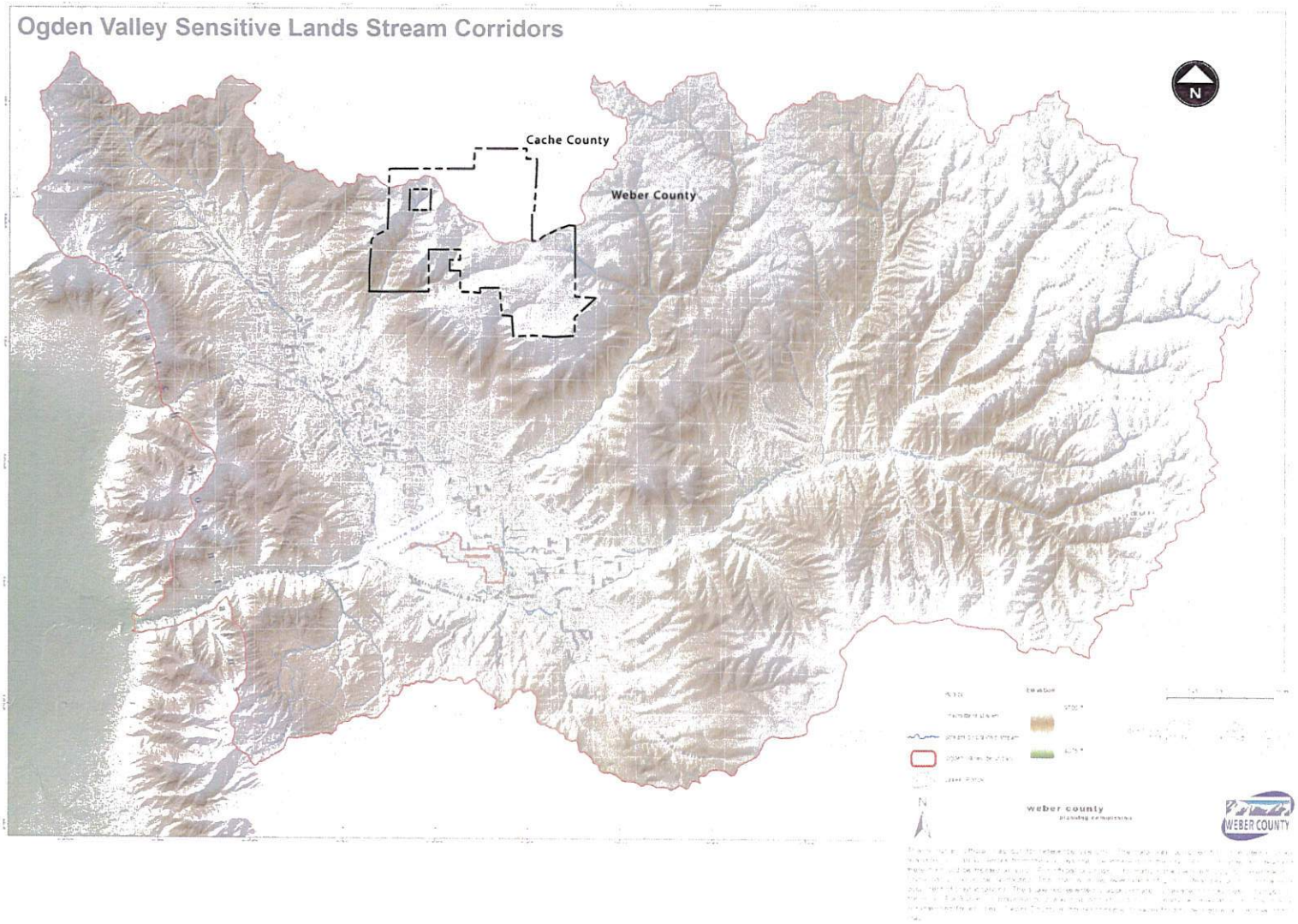


The Powder Mountain property does slightly overlap with the Important Wildlife Habitat Zone as indicated here but both areas are located at the periphery of the project area. No development plans are proposed within or near these areas. Although the proposed development areas are outside of the Important Wildlife Habitat Zones, it is recognized that smaller yet still significant wildlife habitats exist within the project boundary. Future development has been located to account for significant open spaces and buffers to facilitate wildlife habitat and wildlife corridors throughout the project and continued coordination with Weber County and the Utah Division of Wildlife Resources will be a priority to maintain these habitats throughout the project.

Exhibit A
Existing plan with changes noted

Sensitive Land Areas: Stream Corridors

NO CHANGE



The Powder Mountain property is affected by the Ogden Valley Sensitive Lands Overlay District for streams corridors, wetlands and shorelines. The Master Plan has conformed to the development standards outlined in Chapter 43-2. The primary impacts are associated with the Wolf Creek and South Fork drainages in the Southwest portion of the property. These drainages have already been impacted and mitigation measures introduced as part of the existing roadway access to the Powder Mountain resort and any further impacts due to future roadway modifications will conform to the Weber County development standards.

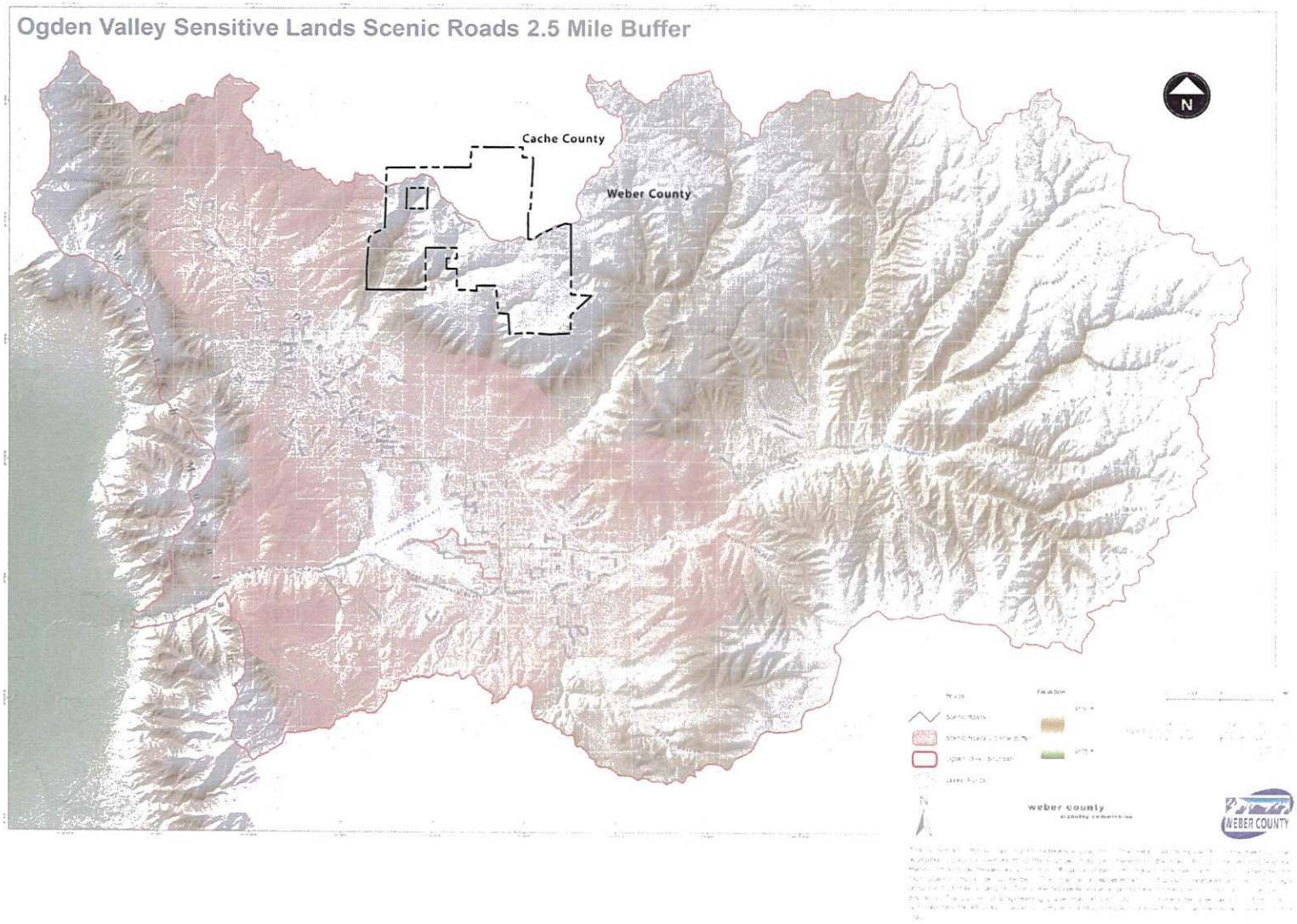
In coordination with the Utah Division of Wildlife Resources (UDWR) all existing riparian corridors within proximity to proposed development areas within the project will be identified and protections put in place at the time of individual project approvals to insure these areas are preserved.

An approved jurisdictional wetland delineation report and concurrence report from the United States Army Corps of Engineers shall be required with the submittal for each phase of development if it is determined that jurisdictional wetlands may exist within any proposed development areas on the property.

Exhibit A
Existing plan with changes noted

Sensitive Land Areas: Scenic Roads 2.5 Mile Buffer

NO CHANGE



Due to its physical location and relationship to the Ogden Valley and its Scenic Roadways, the Powder Mountain property is not affected by the Ogden Valley Sensitive Lands Overlay District for Scenic Corridors, Ridgelines and Historical/Cultural Resources.

Exhibit A
Existing plan with changes noted

NO CHANGE

PLANNING AND DESIGN PRINCIPLES

The Powder Mountain Resort totals approximately 10,000 acres with property that spans both Weber County and Cache County. Approximately 6,160 acres are located within Weber County with the vast majority of this area undeveloped. The existing Powder Mountain Resort Ski Area terrain is primarily within Cache County with only a small area currently located within Weber County. Approximately 4,300 acres of the Weber County portion of the project is vested by an approved Development Agreement dated November 29, 2012, Entry # 2607988 that established density for the property totaling 2,800 units. This application for the DRR1 rezone will add an additional 1,860 acres to the rezone property for a total of 6,160 acres to be processed for rezone. This additional acreage will be committed to project open space with the additional potential density stripped as part of this rezone application.

In 2012, Powder Mountain began to assemble a team of design and development professionals to initiate the Master Plan development that would appropriately integrate the vision for Powder Mountain. This planning process involved dozens of varied and skilled professionals and focused on every aspect of mountain design from roadway and ski design to snow storage and snow removal strategies. This planning process was thorough and extensive.

Due to the size of the property proposed for rezone to DRR1, the proposed development has been organized and broken into separate, smaller planning areas denoted on the Overall Master Plan and Overall Land Use Plan with a letter (Areas A through F). Each planning area is then detailed within this application to further illustrate anticipated master plans for each area identifying anticipated densities, uses, amenities and massing.

The concept plans within this submittal identify those areas most suitable for development and those mountain areas that will remain open space. This distinction has been identiifed as the most important element of the Master Plan. The areas NOT shown for development are as important or more important than those areas that are suitable for development. The development areas throughout the property are shown in two land uses that follow Weber County's DRR1 Zone Land Uses (Section 104-29-8). The most intense use (Mixed Use) allows for all permitted and conditional Land Uses as identified by the DRR1 Zone while the Residential use only allows those uses identified as permitted or conditional residential uses within the zone per the Land Use Code.

The proposed plan for the property within Weber County emphasizes the development of mountain "villages" that are appropriately located and provide suitable land uses, vehicular and pedestrian access, amenities and open spaces based on their locations and proposed functions within the resort.

The first of these mountain villages includes uses to enliven the existing mountain base at Mid Mountain and Sundown (Area A - Mid Mountain) by including hotels and condominiums for overnight accommodations at the existing base of the mountain. This area becomes the primary destination for year round visitors providing direct mountain access. This area also includes potential Hotel uses at the top of the Sundown lift as well as a mix of single family and multi-family homes located along the Sliver above Summit Pass Road and adjacent to the existing single family and multi family homes at Mid Mountain to give the Mid-Mountain area a true ski village mass and energy throughout the year.

The Ridge (Area B) builds upon the existing Hidden Lake Express top terminal which will become the core of this planning area. The Ridge development area will include Ski Lodges, Conference and Meeting spaces, hotels, townhomes and various residential properties ranging from small "nests" to 20+ acre ranches.

Earl's Village (Area C) continues the Powder Mountain tradition of starting your day at the top of the mountain and skiing down. Earl's Village provides a mix of hotel and multi-family development parcels with ski access in three directions and properties with views that are unmatched in the West. Earl's Village sits above the more boutique Summit Powder Mountain Village providing the classic ski mountain village anchor to the Resort.

The heart of the Powder Mountain project is the Summit Powder Mountain Village (Area D). The Summit Powder Mountain Village is the center of the Summit Community and is located on a saddle providing commanding views while simultaneously being tucked away from the rest of the mountain. This location preserves views and provides for a secluded and protected environment. This village provides for ski access into Mary's Bowl, Lefty's and Gertsen Canyon providing immediate access to the world class skiing at Powder Mountain. The Summit Powder Mountain Village contains a mix of hotels, boutique hotels and boutique shops, community amenities, public places and spaces, multifamily and single family home sites including townhomes, condominiums, attached and detached single family and "nests" of all types. This mix of uses surrounds the Summit Powder Mountain Village Main Street and forms the core of the Summit Powder Mountain Village. It also includes clustered residential development tucked amongst the existing trees and just beyond the village core. These areas include single family residential products that begin the density transition to the open spaces with larger lot types including ranch lots.

The Gertsen development area (Area E) transitions from the more dense Earl's and Summit Powder Mountain Villages to less intense yet still clustered multi family and single family units as the project moves toward the project boundary. A small, well organized node of multi family townhomes, "nests" and smaller lot single family units anchor the top terminals of the proposed Vern's and Gertsen lifts with lots getting progressively larger as you move west and down the hill. Here larger estate and ranch lots are tucked into large expanses of aspens and along the edge of the Enchanted Forest.

The Meadow Master Plan (Area F) transitions density from the most dense area of the Summit Powder Mountain Village to the project's south edge. The north edge of the Meadow development area maintains the structured road and lotting systems found in the Summit Powder Mountain Village but begins to loosen this development pattern thru the meadow and out to the rock outcropping with larger estate and ranch lots. The south edge of the development area is a location identified for a small, exclusive boutique hotel and retreat providing a destination anchor to the resort with views overlooking the Ogden Valley and Mount Ogden.

Throughout the planning process, open spaces and trail corridors and connections took center stage as seen on the Open Space and Trail Plan. This ensured that access to the beautiful and abundant natural features within the project remains accessible and preserves as much of this natural environment as possible.

The proposed Powder Mountain project is compatible with surrounding land uses and, as outlined herein, is in compliance with the goals and objectives identified in the Ogden Valley General Plan. The impact to the surrounding area will be positive as outlined in the Benefit Analysis. The impact on traffic congestion through the Valley will be minimal as outlined in the traffic study completed as part of the transportation element which is included as Exhibit 2. The Master Plan for Powder Mountain will add a much needed boost to the Powder Mountain Ski Area while also providing a unique on-mountain development that will include a well placed and well balanced mix of mountain uses that will provide Powder Mountain and maybe just as importantly, Weber County, with a project that is sustainable and advances the community goals of a Destination Recreation Resort.

Exhibit A
Existing plan with changes noted

NO CHANGE

SUSTAINABILITY

The vision for development on Powder Mountain is to create a setting that exemplifies the core values of the Summit community and celebrates the inherent beauty of the natural landscape.

Core Values. We will create a built environment that:

- Is made for people and promotes quality of life.
- Pushes the limits of sustainable performance, as a result of our innovative mind-set and high level of knowledge.
- Merges urban living with the qualities of nature.
- Achieve net zero emissions over it's lifespan.
- Is functional, smart and aesthetically appealing, building on the best of the regional design tradition.
- Is robust, durable, flexible and timeless - built to last.
- Utilizes local resources and is adapted to local conditions.
- Is produced and maintained through partnerships founded on transparent collaboration across borders and disciplines.
- Employs concepts that are scalable and used globally.
- Profits people, business and the environment.

We are actively working to complement the ecosystem that currently exists on Powder Mountain through adherence to these core values and principles. It is our goal to uplift the economy and community through best practices that will lead the region in our approach to sustainability and community development.
We are filtering our decisions through the lens of environmental stewardship that encompasses waste, water, power, our building standards and the flow of transportation throughout our village among others.

ECONOMIC SUSTAINABILITY

As identified within the provided Benefit Analysis (Exhibit 4) the proposed Master Plan will provide the County with an economically sustainable development that will stand on its own two feet while providing substantial local and regional economic benefits.

COMMUNITY SUSTAINABILITY

Sustainable Development:
Powder Mountain aspires to a higher level of project wide sustainable development and is requiring green building practices as part of the Design Guidelines to insure the construction and maintenance of the project is sustainable. These requirements include energy efficiency, water conservation, limiting grading and limiting building footprint, using sustainable and locally sourced building materials, and limiting building heights to protect view. The requirements are detailed in Exhibit 3 - Design Guidelines, attached as part of this application.

Transportation:
Powder Mountain is proposing some of the most aggressive traffic mitigating elements ever seen in a development application. As identified in the traffic study, the project is providing mass transit alternatives to incentivize skiers to use existing and expanded UTA services, utilizing park and ride locations to shuttle additional guests to the mountain as well as providing internal shuttle and car share services limiting the total number of trips to, from and within the resort.

Other methods to reduce transportation impacts include encouraging alternative modes of transportation through site planning and building orientation that emphasize connections to sidewalks and trail networks. Homes should be placed and built incorporating easy connections for pedestrian and bike access to trails, sidewalks and streets.

The project is also providing those goods and services required by guests within the resort villages reducing the need for additional trips off the property. These will include such uses as a grocer, restaurants, theaters, shopping and recreational amenities among others.

Market Sustainability:
Variety is important to serve the wants and needs of a diverse community and ensure its sustainability. The product variety within the project will provide for market sustainability as well as foster an authentic community with a mix of residential products and commercial uses that will create real village life. Civic spaces and recreational opportunities will serve to further provide all residents and guests with both active and passive opportunities that range from skiing, mountain biking, hiking and organized outdoor events such as music festivals, Summit Outside, poetry readings, etc.

Open Space:
Encourage design that emphasizes the natural connection to open space and parks. Provide maximum continuity of open space and preserve important natural vistas that reinforce a sense of place and relationship to the natural environment. Integrate views and access into the open space trail network from homes. Promote the development of site plans that create attractive, comfortable outdoor spaces.

Topography:
Integrate natural site features such as topography, views and vegetation into site design. Building placement should follow contours rather than being placed at right angles to the prevailing slope. On sloping sites, staggering placement of homes along opposite sides of the street, rather than siting homes directly opposite one another, can provide better preservation of views. Use topography to create continuous green space connectivity between homes. Retain the maximum possible amount of natural vegetation.

Landscaping:
Hydrozoning, defined as "the grouping of plants that have similar water requirements," is a highly efficient design strategy for water irrigation systems and landscape planning. Strategies of hydrozoning, low-impact irrigation methods, and efficient watering schedules are to be included in all submitted landscape plans.

Fire protection:
A Community Fire Plan for the Wild land - Urban Interface (Exhibit 5) has been developed for the initial Phase 1 PRUD approvals for the 154 units at Powder Mountain. This plan shall be implemented for the remaining development at Powder Mountain and used as the standard for all fire safety planning and protection measures within the project.
Additionally, all structures will provide landscaping that creates a defensible space for calculating the fire hazard severity. This places an emphasis on utilizing fire resistant vegetation or growth within the planned landscape adjacent to all buildings to minimize the potential for transmitting fire from the native growth to any structure.

AESTHETICS

The goal of Summit Powder Mountain is to design sustainably driven, site responsive structures using regionally sourced, familiar and heritage materials oriented in clever ways to create truly progressive mountain architecture.

- Humble
- Site responsive
- Sustainably driven
- Familiar, regional and heritage materials in clever orientation. Classics with a twist.
- Subtle elements of surprise, wonder, awe
- Develop a new archetype of progressive mountain architecture
- Frame up inspiring views
- Build value through defining a functionally driven style
- Create a cohesive exterior vernacular while allowing interiors to highlight Owner's preferred finishes and furnishings

Define Summit Powder Mountain architecture as aesthetically timeless while featuring the pinnacle of new building methods that enhance the experience of living in the mountains.

Exhibit A
Existing plan with changes noted

NO CHANGE

ENVIRONMENTAL STEWARDSHIP

Development areas are planned as compact neighborhoods to create real places. These are clustered to limit the footprint of the development thru location and tighter massing of buildings and uses preserving as much of the natural character of the land as possible. This careful integration of all proposed development is further exemplified in the following critical areas of resource management:

Water:
Powder Mountain is implementing requirements for indoor water as part of the Design Guidelines to reduce the project's average indoor water demand (and the associated wastewater generation) with a goal of 50 percent compared to State Water (and Wastewater) Design Requirements. This includes requirements for water efficient fixtures and appliances for new residential construction and limits on landscape irrigation to reduce the overall project water use by 20 to 25 when compared to other similar developments in Utah.

Powder Mountain is reducing irrigation water demands by limiting the amount of irrigated area allowed for each lot as part of the Design Guidelines. The Guidelines also require a water budget, weather based irrigation control, water efficient irrigation system, the use of native and low water plants and encourage opportunities for strategies that might include grey water and/or rainwater harvesting (in strict conformance with State law).

Wastewater:
Powder Mountain's goal to reduce indoor water use by 50 percent when compared to State requirements will also reduce wastewater generated by the project by 50 percent. The use of various advanced wastewater treatment techniques and reuse will also be considered for future phases of the project such as techniques for collecting and utilizing greywater (showers, bathroom sinks, washing machines) and rainwater are encouraged for use as supplemental landscape irrigation. Any storage and related equipment should be below grade or visually screened from neighbors and public paths. All gray and rainwater capture will comply with Utah State requirements.

Stormwater:
The state of the practice for drainage has progressed significantly over the past several years as an awareness of the need to implement best management practice (BMPs) has grown and NPDES regulations have been implemented. To help reduce runoff peaks and volumes from development areas, Powder Mountain will emphasize minimizing directly connected impervious areas to route runoff from impervious surfaces over landscaped or natural areas to slow down runoff and promote infiltration. Powder Mountain will also focus on reducing paved areas and directing stormwater runoff to buffer strips, and vegetated swales to slow down the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of stormwater. Every effort will be made to maintain natural conditions and prevent the degradation of downstream water quality.

Energy:
Reducing energy use with more efficient buildings as well as incorporating solar, solar domestic hot water, geothermal and ground source heat pump to reduce traditional energy sources are all under consideration for Powder Mountain.

Solar Energy:
Site and building designs are to implement orientation strategies that optimize solar exposure and incorporate passive and active solar systems. Proper solar orientation can substantially reduce energy costs and should be applied wherever possible. Site and building design are to be energy efficient and incorporate natural cooling and passive solar heating. This may include:

a. Thermal or Active Solar Panels
(can incorporate radiant heating systems)
b. Extended Eaves
c. Window Shade Elements
d. Awnings
e. Strategic Tree Placement
(for both shading and wind buffering)
f. Strategic Building and Window Orientation

The Design Guidelines address increasing the efficiency of heating buildings using passive solar and day-lighting energy building design, solar hot water and space or water heating using solar-thermal panels. The Design Guidelines include opportunities for direct solar (photo-voltaic panels) as well as increasing the efficiency of heating buildings using passive solar and day-lighting energy building design, solar hot water, and space or water heating using solar-thermal panels.

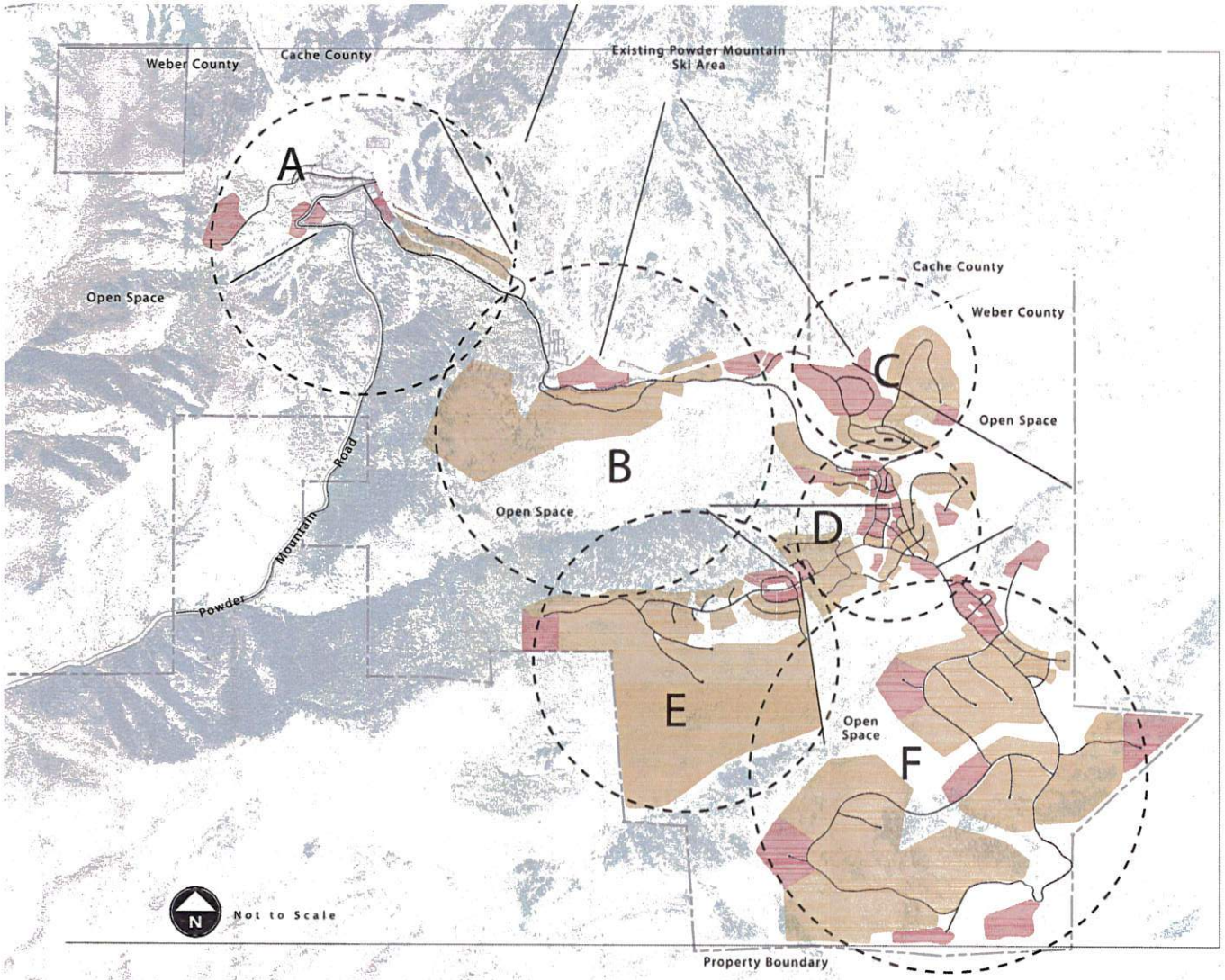
Powder Mountain is also exploring a solar garden approach to delivering power to the community. A solar garden approach would require the placement of solar panels in locations that are environmentally appropriate and aesthetically pleasing and Powder Mountain would work with the Utah Division of Wildlife Resources to ensure that any proposed site would minimize potential impacts to wildlife and wildlife habitat.

Geothermal Energy:
Powder Mountain's Design Guidelines also encourage alternative energy strategies like geothermal exchange heat pumps. Heat pumps utilize the subsurface ground which maintains an almost constant temperature of 50-60 degrees Fahrenheit. Since the ground is warmer than the air above the surface in the winter and cooler in the summer, geothermal heat pumps use a ground heat exchanger and a pump unit to heat and cool buildings and heat water. They use less energy than conventional heating and cooling systems and are more efficient, saving energy, money and reducing air pollution. Powder Mountain is also exploring community wide geothermal solutions.

Wind:
Wind energy systems may be allowed and should be considered as portions of the Powder Mountain property offer the potential for ideal wind energy systems but these systems must be sensitive to the community and environmental impacts they can create and any system proposed must comply with local land use code requirements and will be subject to review and approval by the Architect's Review Committee as well as coordinated with the Utah Division of Wildlife Resources.

Exhibit A
Existing plan with changes noted

Overall Land Use Plan



The Overall Land Use Plan depicts general areas for development within the proposed Rezone boundary. These areas indicate general land use areas and roadway circulation proposed.

Each development area identified is represented in greater detail within this Rezone Application.

UPDATED LAND USE PLAN

DEVELOPMENT AREAS

A - Mid-Mountain
B - The Ridge
C - Earl's Village
D - Summit Village
E - Gertsen
F - The Meadow

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

DEVELOPMENT DATA

HOTELS	1,218 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	159,000 SF
RETREATS	180 ROOMS
RESIDENTIAL	2,334 UNITS
TOTAL UNITS	2,800 UNITS

NOTES:

1. MIXED USE LAND USE INCLUDES ALL PERMITTED OR CONDITIONAL USES AS IDENTIFIED WITHIN THE DRR1 ZONE (SEC. 104-29-8)

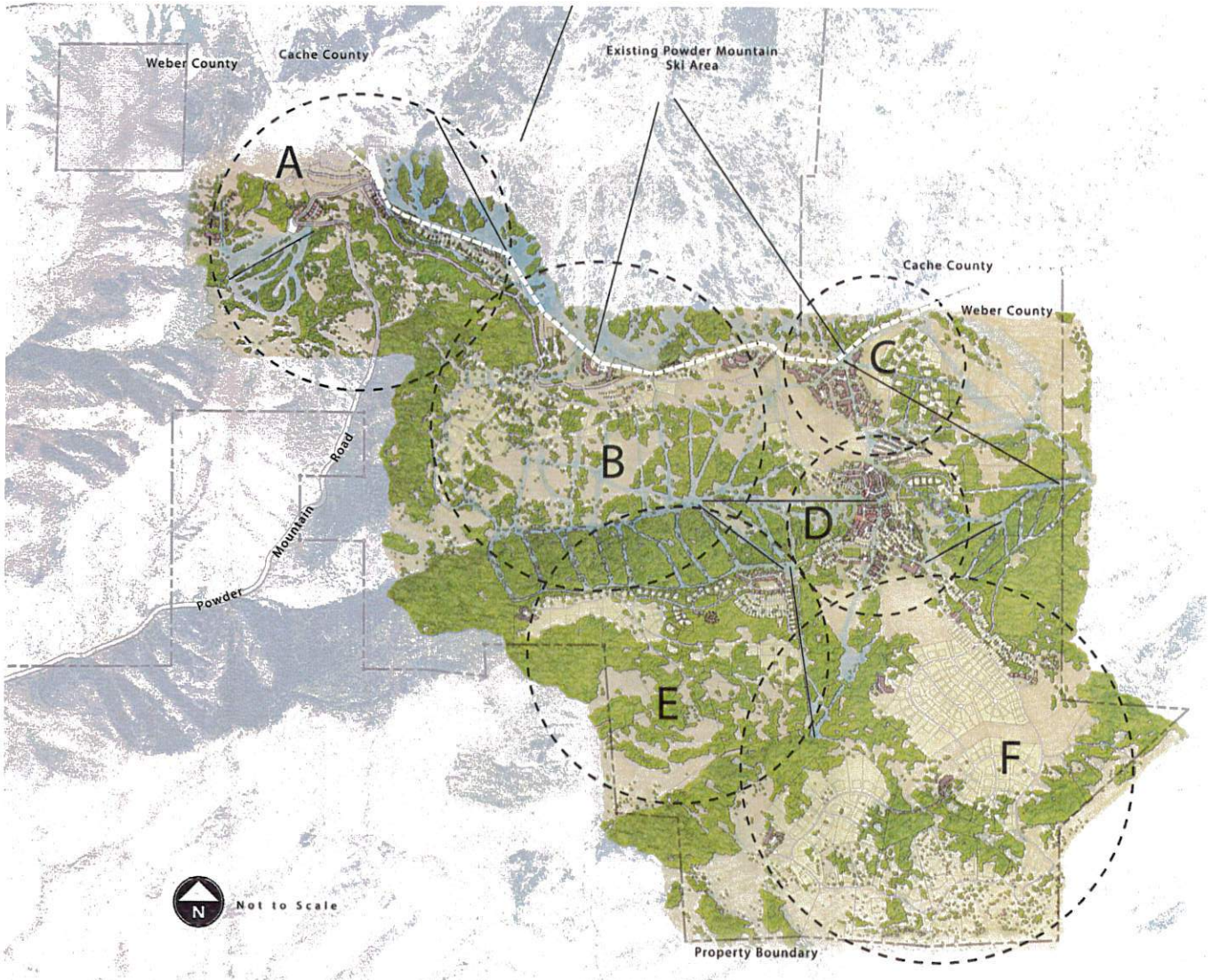
2. RESIDENTIAL USES SHALL INCLUDE ALL PERMITTED OR CONDITIONAL USES AS IDENTIFIED FOR RESIDENTIAL USES WITHIN THE DRR1 ZONE (SEC. 104-29-8)

3. HOTEL AND RETREAT ROOMS EQUAL .33 UNITS EACH FOR DENSITY CALCULATIONS

Exhibit A
Existing plan with changes noted

Overall Master Plan

REMOVED EXHIBIT



The Overall Master Plan depicts conceptual development patterns and connectivity within the proposed Rezone boundary. These areas identify the general development massing, open spaces, recreational components and pedestrian and roadway circulation proposed.

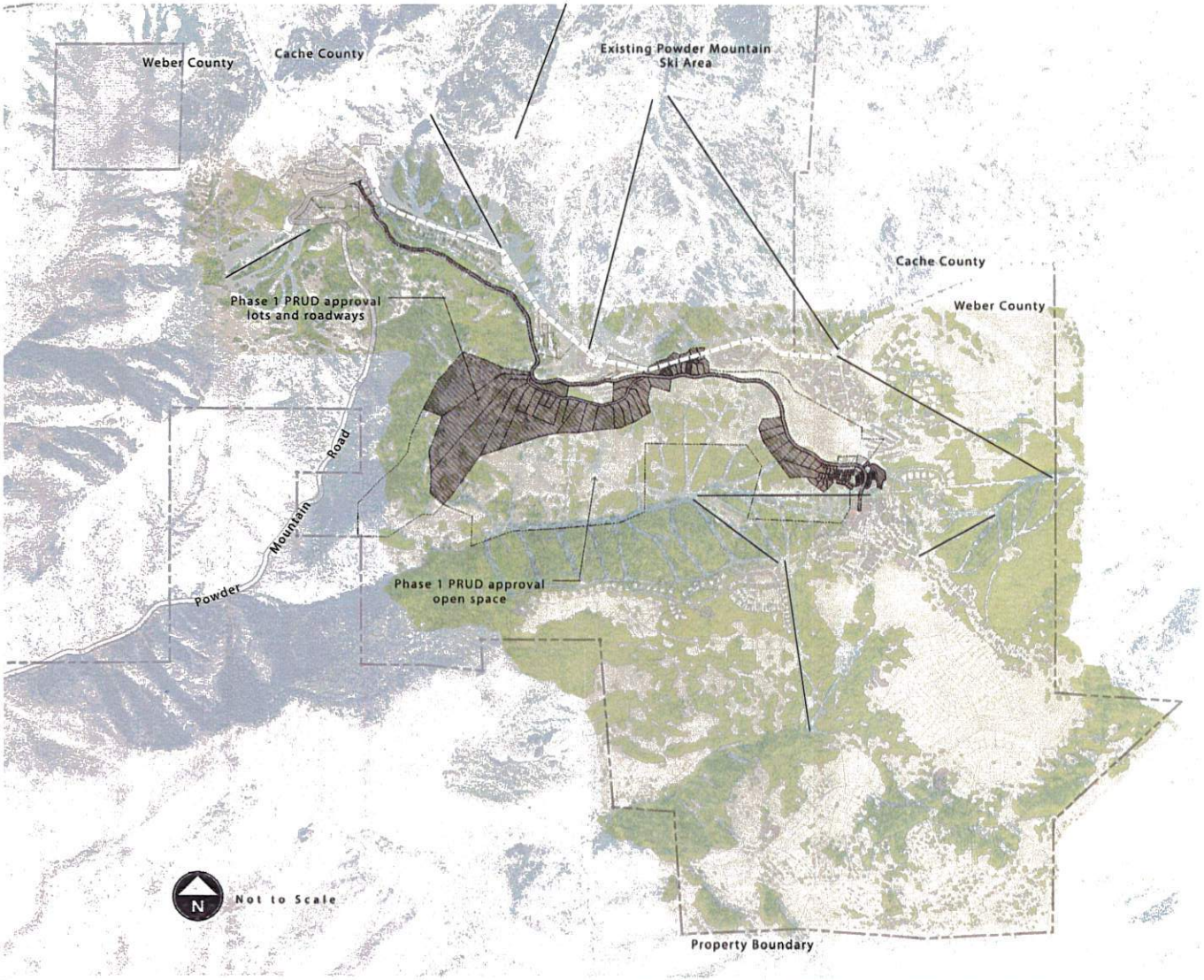
Each development area identified is represented in greater detail within this Rezone Application.

DEVELOPMENT AREAS

A - Mid-Mountain
B - The Ridge
C - Earl's Village
D - Summit Village
E - Gertsen
F - The Meadow

Exhibit A
Existing plan with changes noted

Existing Phase 1 Approval



This Master Plan exhibit identifies the approved PRUD project area that includes 154 units and is identified as Phase 1 of the Summit at Powder Mountain community. This approval includes 154 units that are comprised of a mix of large ranch lots, estate single family lots, single family nests, single family village lots and single family zero lot line lots within the Summit Powder Mountain Village. Phase 1 approvals stretch across the Ridge development area and into the Summit Powder Mountain Village and includes approvals and plats for all units and the roadways dedicated to serving these units and as shown here.

REMOVED ILLUSTRATIVE BACKGROUND

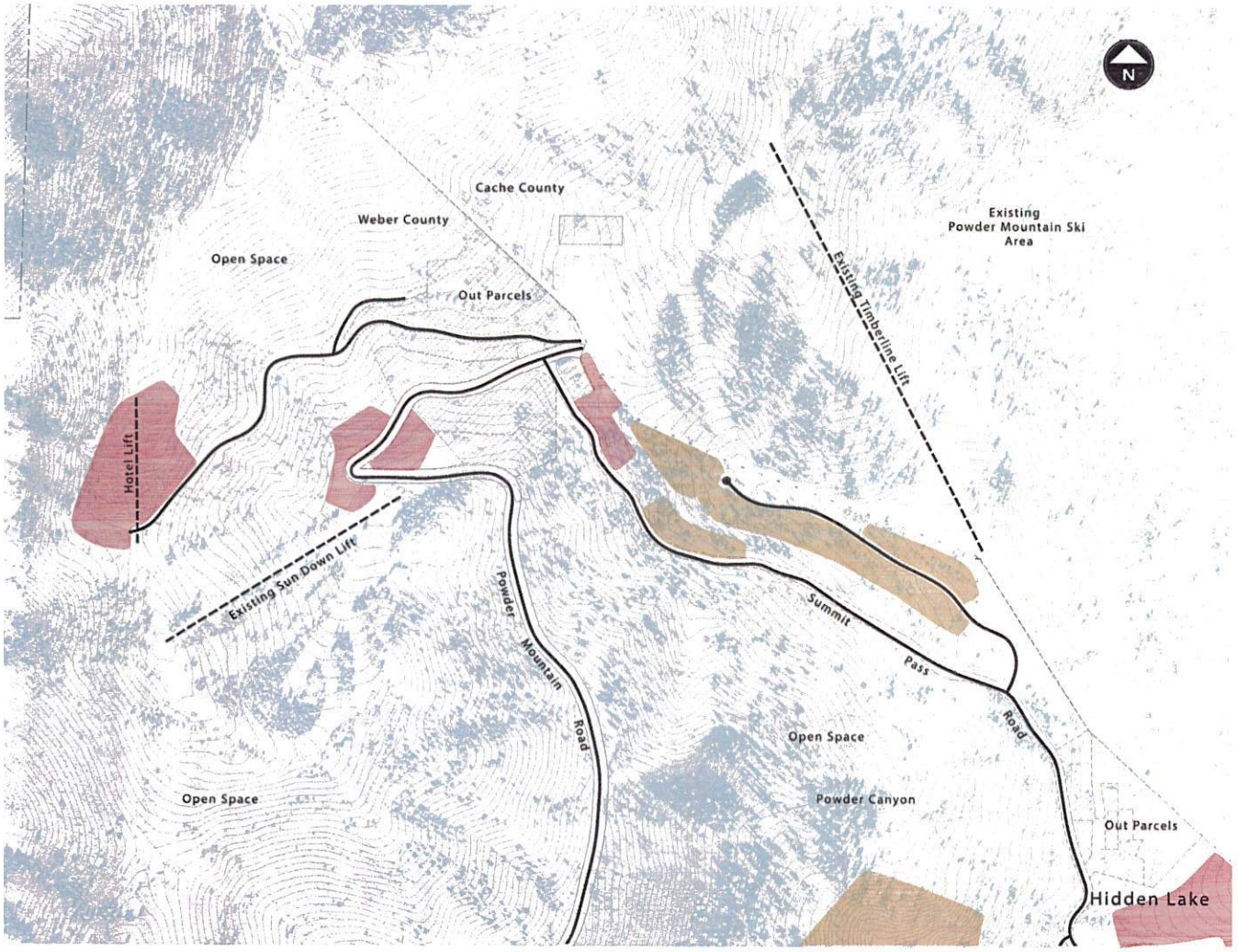
REMOVED FUTURE LIFTS

Exhibit A
Existing plan with changes noted

Mid-Mountain Slope Map & Aerial Photo

REMOVED EXHIBIT

The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.



DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

SLOPE LEGEND

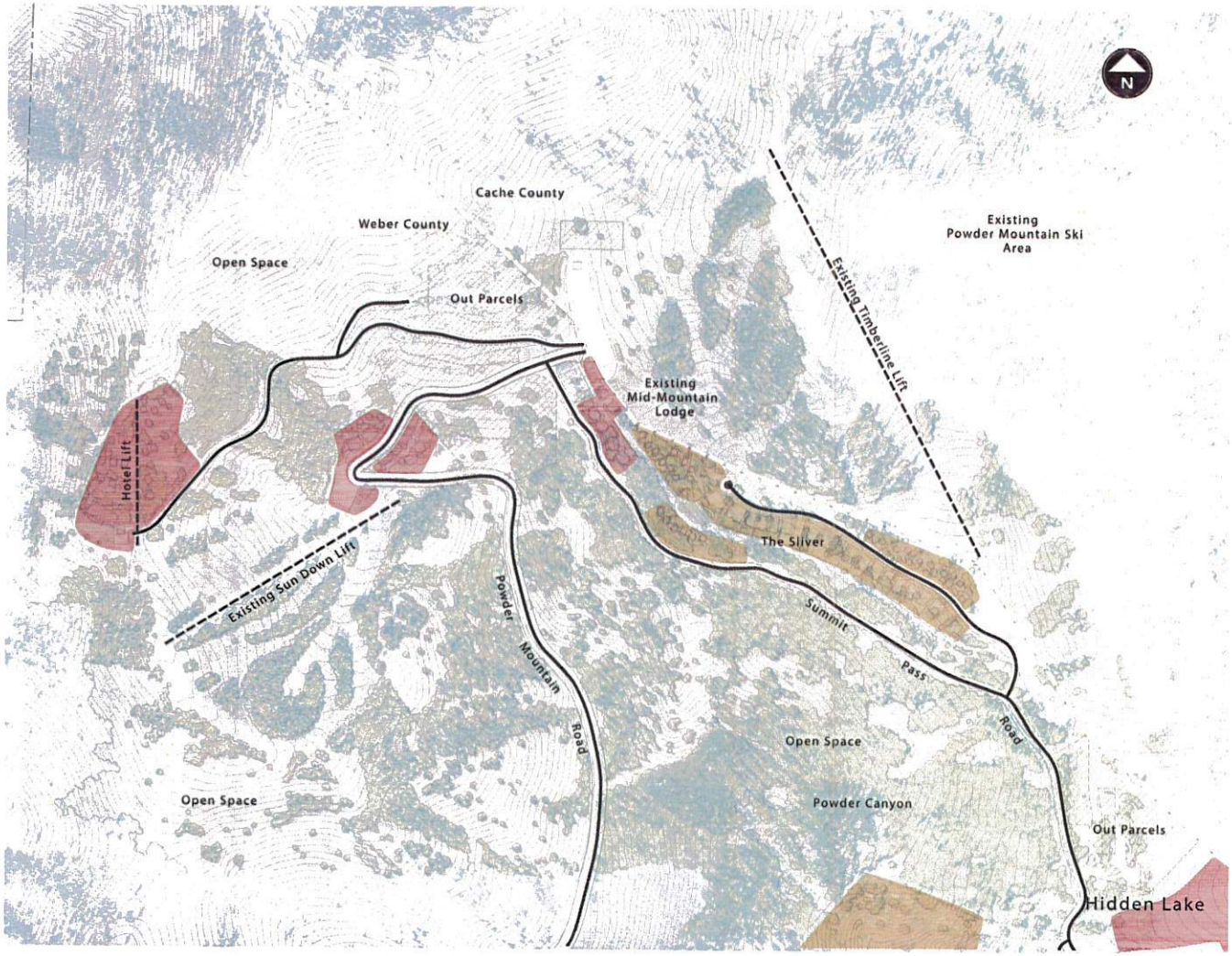
SLOPES 30-40%

SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

Mid-Mountain Master Plan



Mid-Mountain is the entry portal to Summit Powder Mountain. This area will provide a subtle entry into the Resort with a mix of Hotel, townhome and single family development opportunities that will support the beginner ski area at Sundown as well as the existing ski access to the mountain at the Mid Mountain Lodge.

CHANGED PAGE TITLE

REMOVED ILLUSTRATIVE BACKGROUND

CROPPED PLAN FOR PLAN AREA ONLY

DEVELOPMENT LEGEND

MIXED USE
HOTEL
COMMERCIAL
SKI LODGES & SERVICES

RESIDENTIAL

DEVELOPMENT DATA

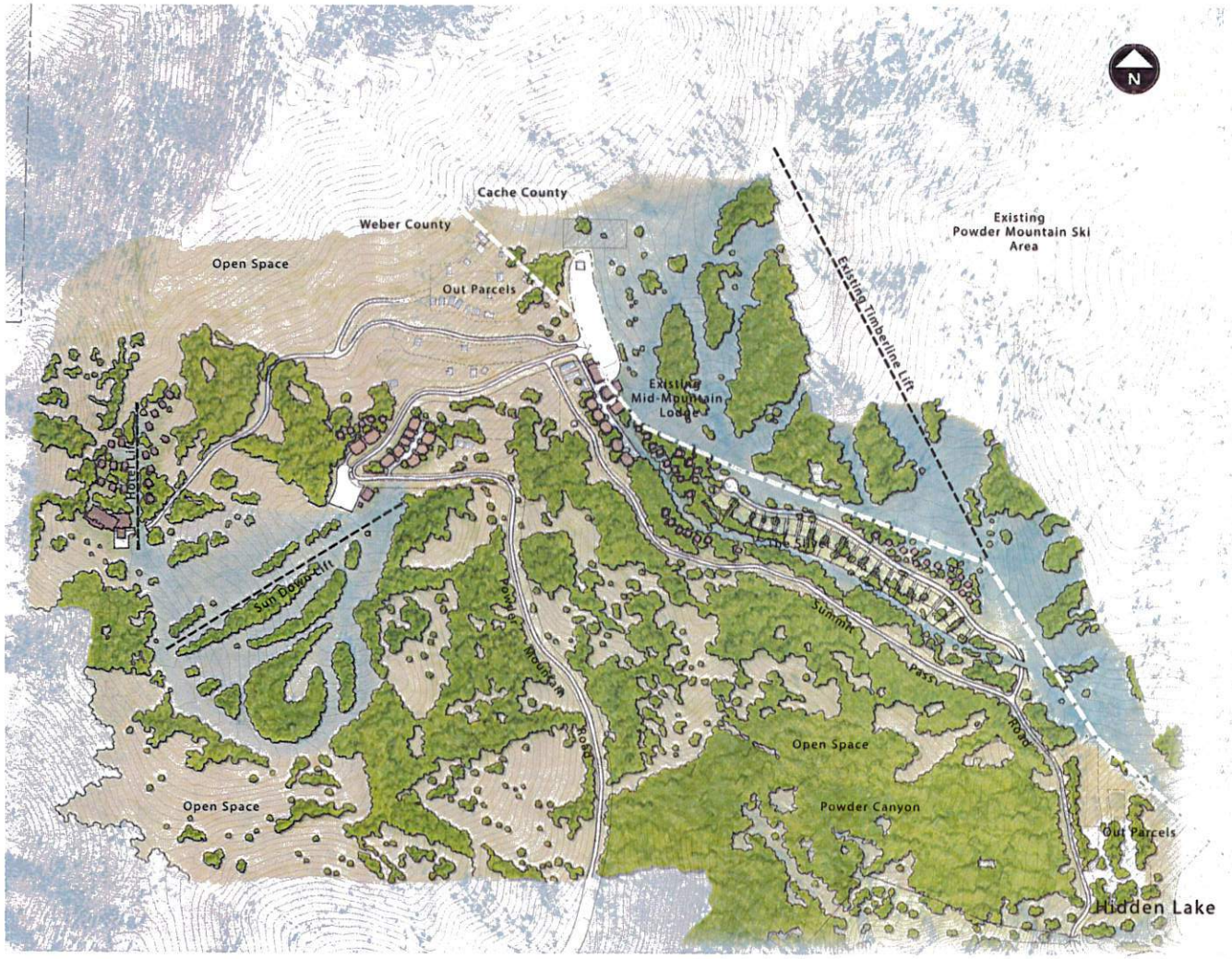
HOTELS	108 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	10,000 SF
RESIDENTIAL	155 UNITS

KEY MAP

Exhibit A
Existing plan with changes noted

Mid-Mountain Illustrative Plan

REMOVED EXHIBIT



The illustrative plan identifies the areas near the Sundown lift and the existing Mid Mountain Lodge for multi-family ski village units. The saddle near the top of the Sundown Lift is proposed as a dramatic Boutique Hotel location located just above the lift. This hotel site would require access via a private roadway (Aspen Drive) currently serving existing lots above Powder Mountain Road. It is recognized that any development utilizing private roadways for access would require approval from all entities controlling those private roadways. This potential hotel location and ultimate building design will also be studied further to mitigate any possible dark sky intrusion to the project and to those residents of Ogden Valley with the preservation of a dark night sky a priority as identified in the Design Guidelines.

A mix of single family home sites and single family nests are proposed along the south slopes of the County line in an area called The Sliver providing dramatic long views with ski-in/ski-out access while maintaining the existing ski terrain and mountain access.

KEY MAP

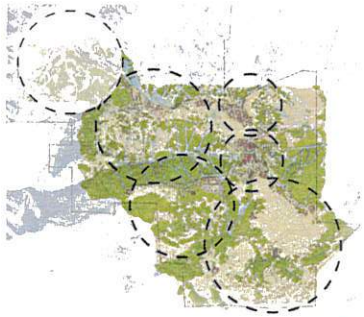
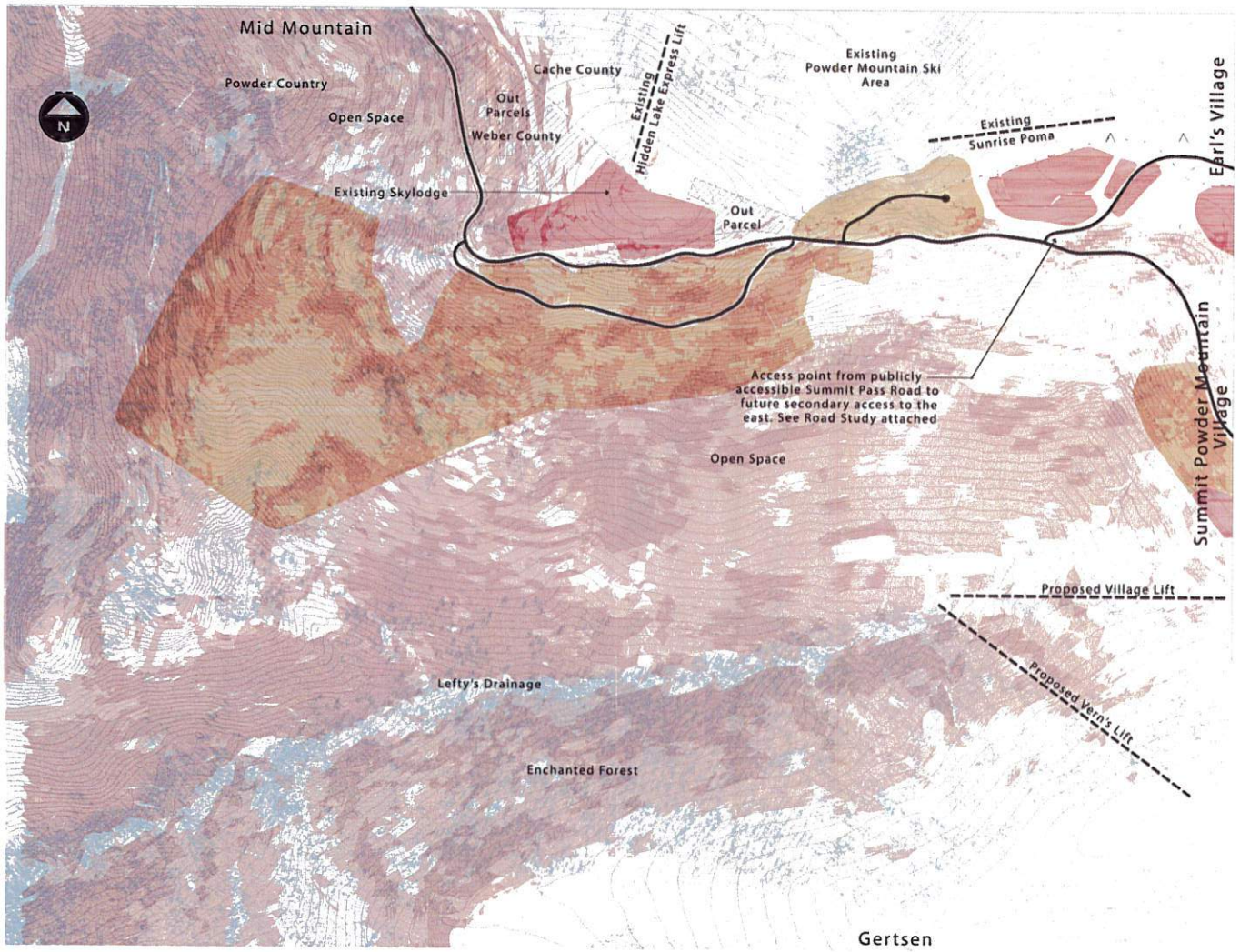


Exhibit A
Existing plan with changes noted

The Ridge Slope Map & Aerial Photo

REMOVED EXHIBIT

The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.



DEVELOPMENT LEGEND

- MIXED USE
- RESIDENTIAL

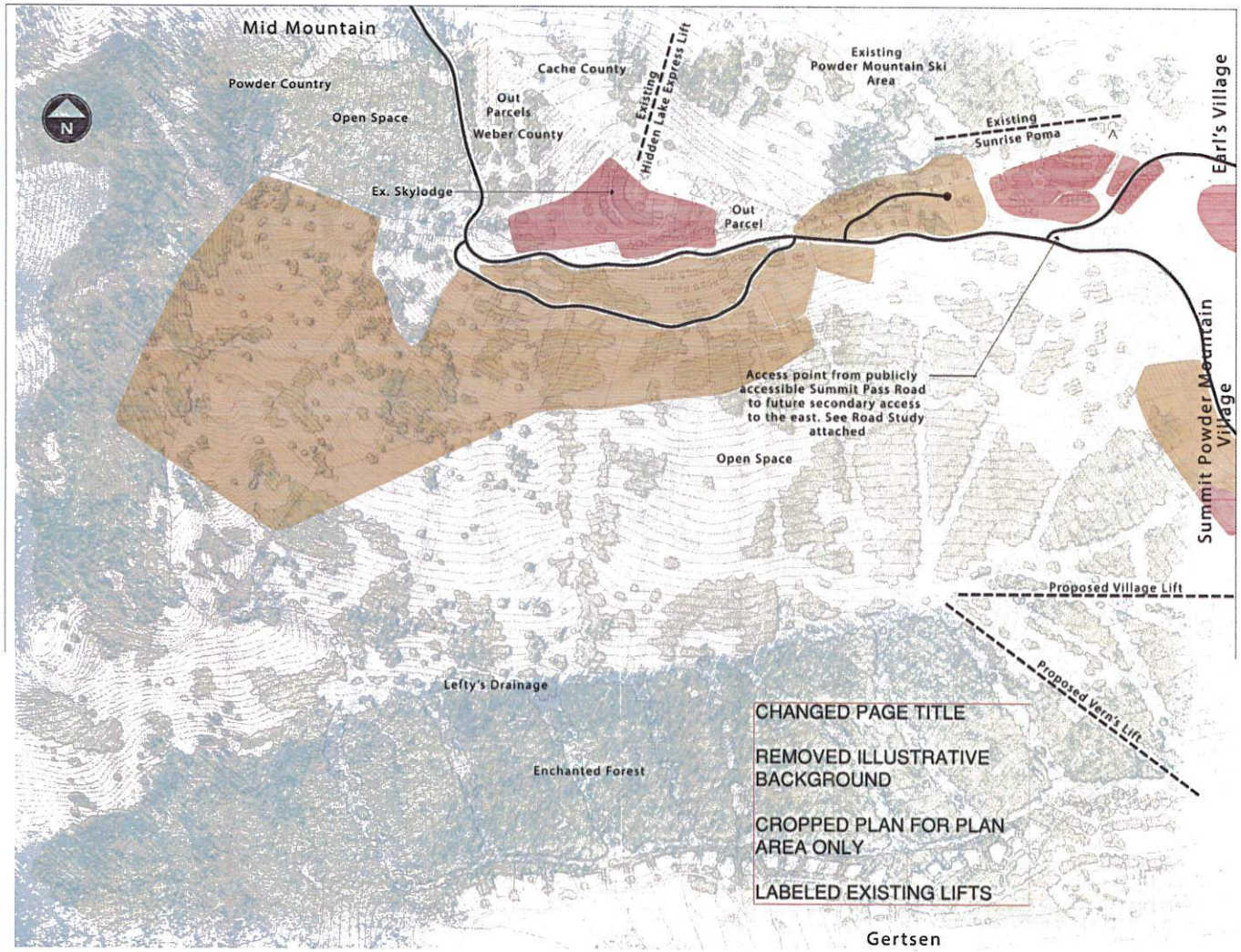
SLOPE LEGEND

- SLOPES 30-40%
- SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

The Ridge Master Plan



The Ridge development area includes hotel and associated skier lodges/skier services as well as multi family units all centered around the "top of the mountain" and existing and proposed top lift terminals providing the classic Powder Mountain ski experience. Remaining development areas provide a mix of small "nests" tucked among existing vegetation and a mix of single family lot sizes providing dramatic views to Mount Ogden, the Wasatch Range and the Great Salt Lake.

DEVELOPMENT LEGEND

- MIXED USE
  - HOTELS/RETREAT
  - COMMERCIAL
  - SKI LODGES & CONF. CENTER
- RESIDENTIAL

DEVELOPMENT DATA

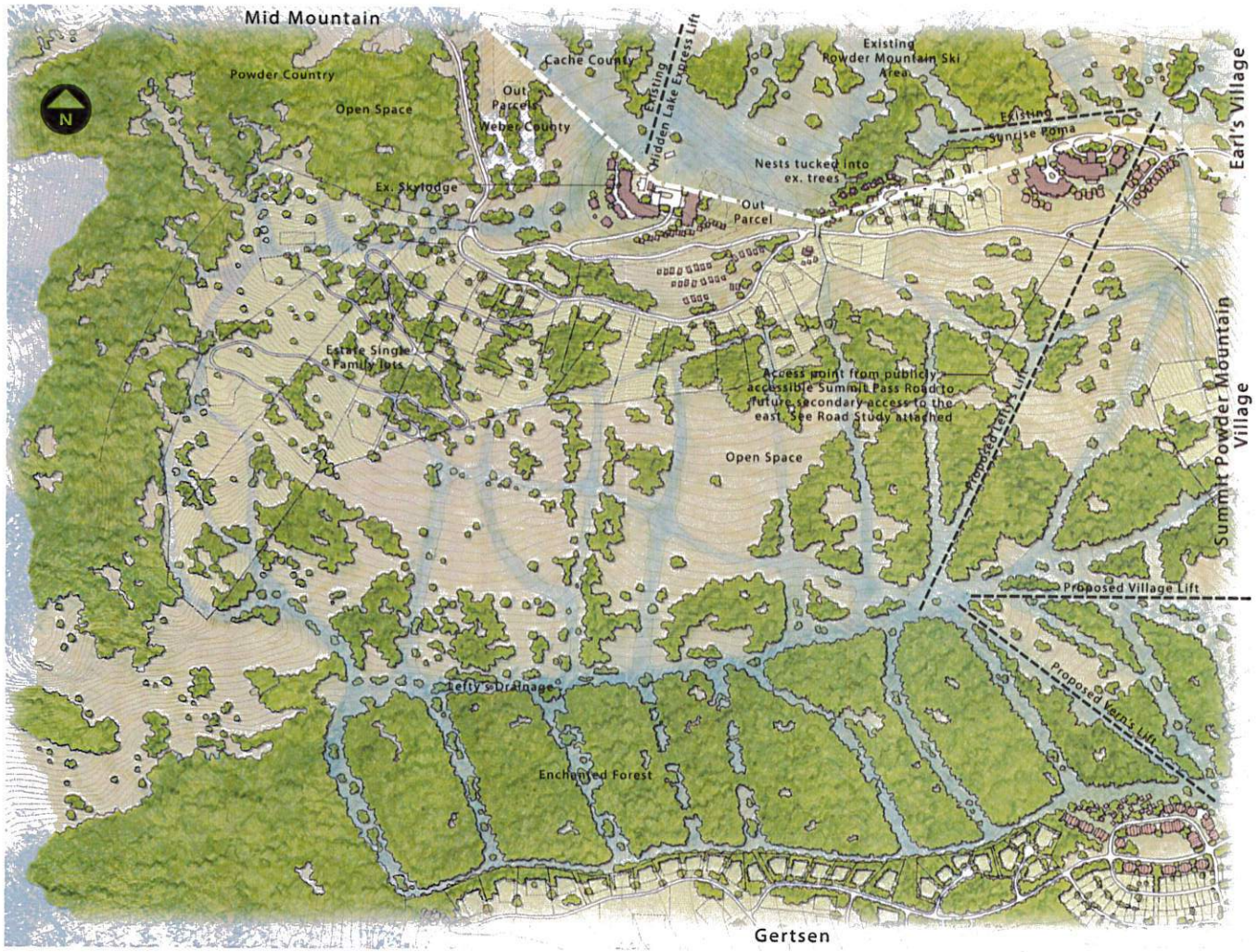
HOTELS	180 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	19,000 SF
RESIDENTIAL	159 UNITS

KEY MAP

Exhibit A
Existing plan with changes noted

The Ridge Illustrative Plan

REMOVED EXHIBIT



Placement of development within the Ridge area has been sensitive to the existing ski experience at Powder Mountain with future hotels and multi family units designed to be within ski access to the existing mountain while maintaining the existing ski accesses. Single family units have been located on the mountain within existing tree massing to provide visual and physical protection as well as to maintain those important open meadow and hillsides for the remainder of the Resort.

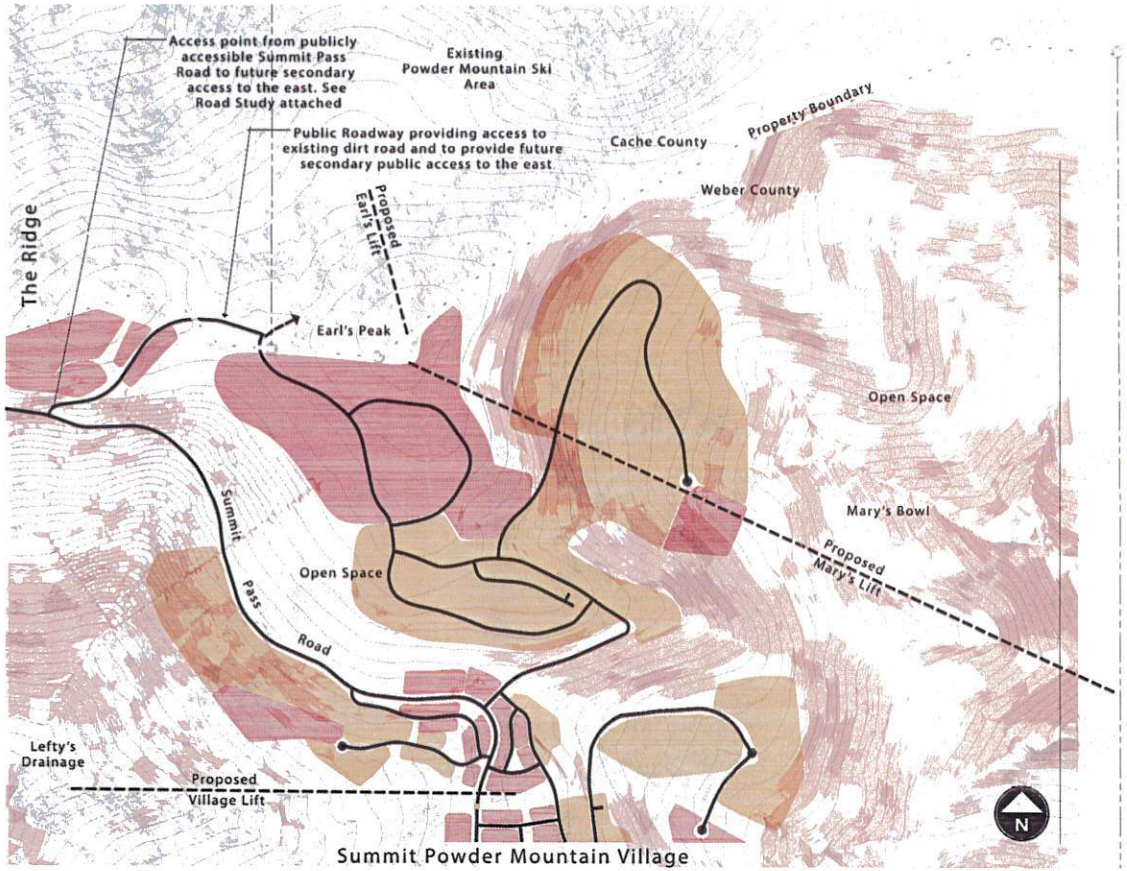
KEY MAP

Exhibit A
Existing plan with changes noted

Earl's Village Slope Map & Aerial Photo

REMOVED EXHIBIT

The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.



DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

SLOPE LEGEND

SLOPES 30-40%

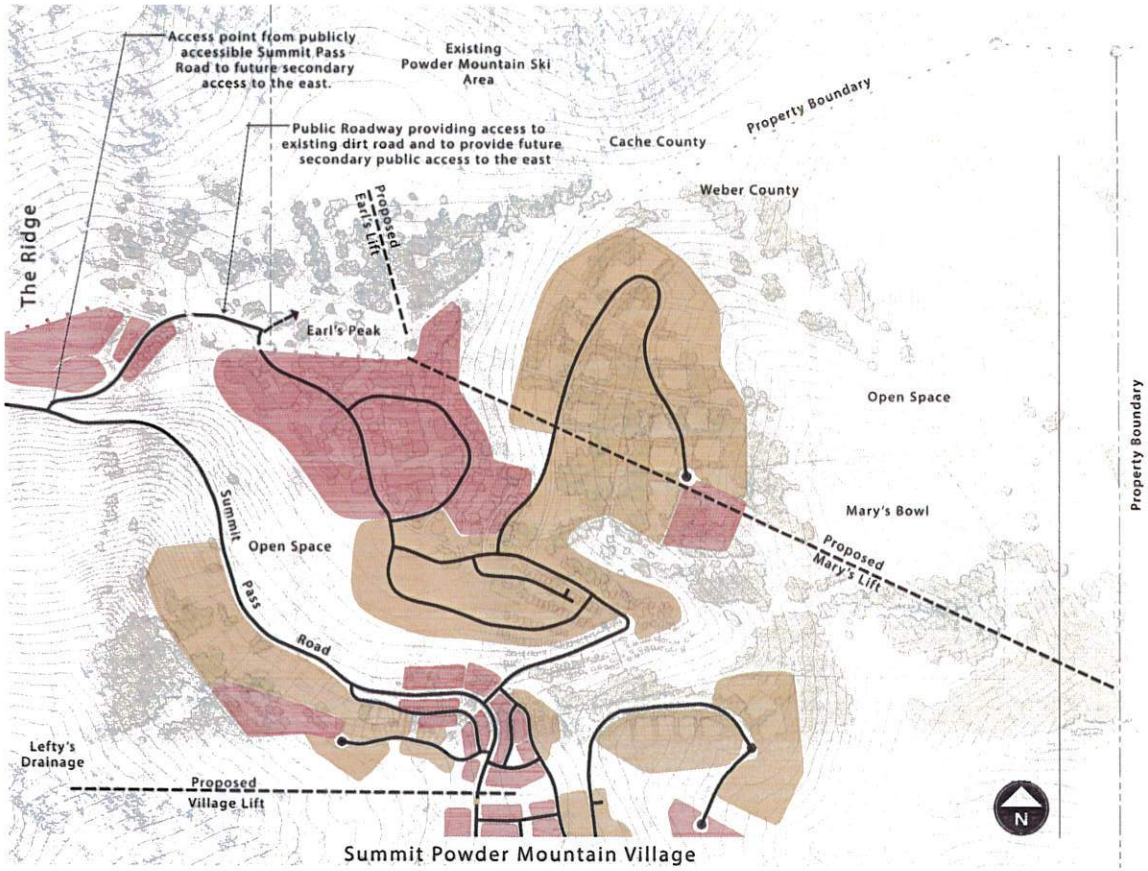
SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

Earl's Village Master Plan

Earl's Village continues the Summit Powder Mountain tradition of starting your day at the peak skiing down from the top of the mountain. The Village provides a mix of hotel and multi-family development parcels with ski access in three directions and with views that are unmatched in the West. Earl's Village sits above the more boutique Summit Village providing the classic ski mountain village anchor to the Resort.



CHANGED PAGE TITLE

REMOVED ILLUSTRATIVE BACKGROUND

ADDED BOUNDARY TO DELINEATE PLAN AREA

LABELED "EXISTING" LIFTS

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

DEVELOPMENT DATA

HOTELS	240 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	40,000 SF
RESIDENTIAL	814 UNITS

KEY MAP

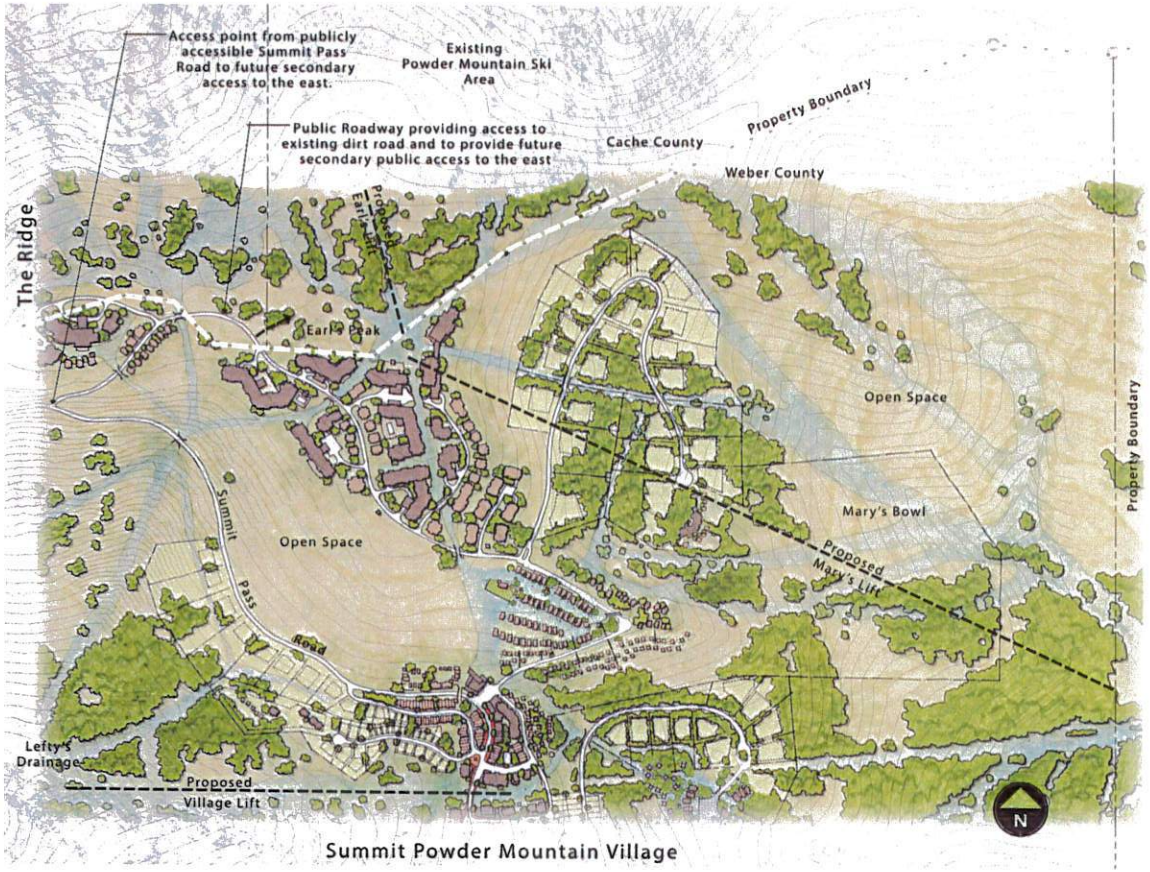
Exhibit A
Existing plan with changes noted

Earl's Village Illustrative Plan

REMOVED EXHIBIT

Earl's Village is the high mountain ski destination within the resort with hotels, townhomes and condominiums located around the south side of Earl's Peak. The Village provides for excellent access to the existing Powder Mountain Ski terrain while providing development parcels with commanding views from the top of the Mountain. Ski access out of the Village leads to Lefty's, Mary's Bowl and to the Summit Village. Earl's also contains a limited number of ski-in/ski-out estate single family lots at the top of Mary's bowl.

Earl's Village also provides a secondary access stub for the project providing public access to the adjacent properties north and east of the Powder Mountain project area. This access is provided via Summit Pass Road with a roadway stubbed to the adjacent parcel and existing dirt road where the most feasible future roadway connection to the east exists. A separate roadway study has been provided to Weber County engineering to illustrate this connection feasibility.



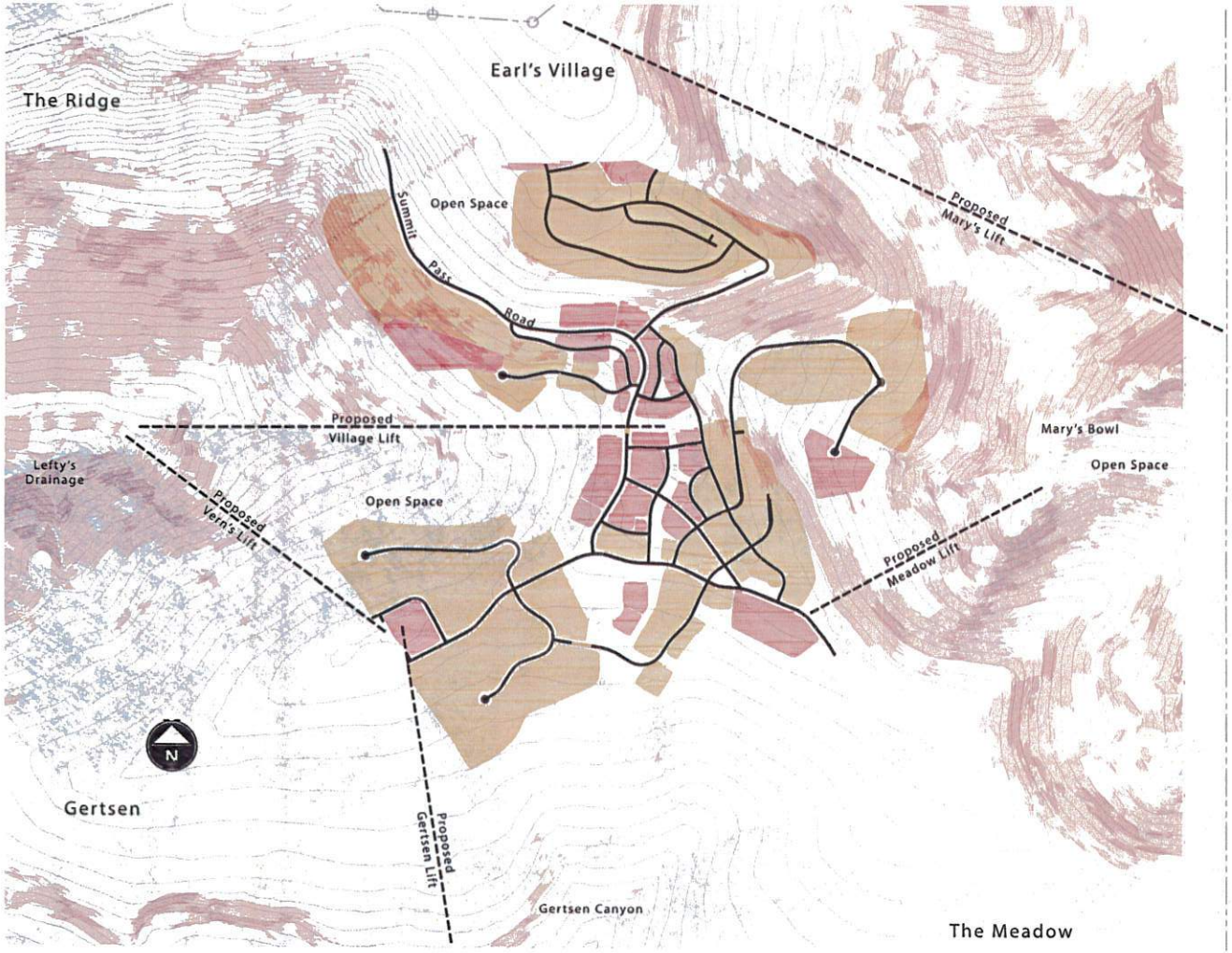
KEY MAP

Exhibit A
Existing plan with changes noted

Summit Powder Mountain Village Slope Map & Aerial Photo

REMOVED EXHIBIT

The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.



DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

SLOPE LEGEND

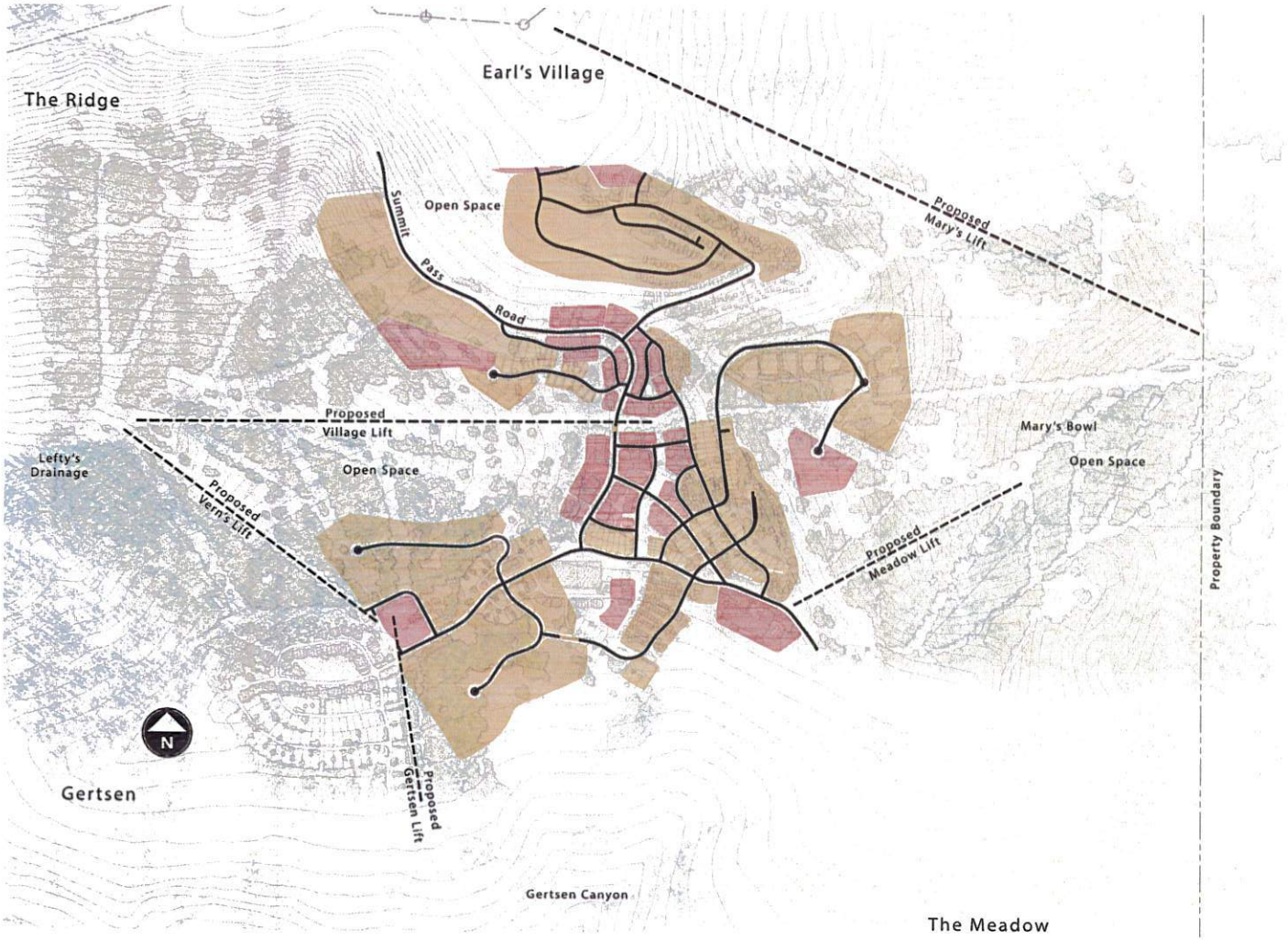
SLOPES 30-40%

SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

Summit Powder Mountain Village Master Plan



Summit Powder Mountain Village is the activity center for the Resort with Main Street retail shops, destination amenities such as lodges, public plazas, recreational facilities and trail heads to access the outdoors. The Summit Powder Mountain Village is modeled after small mountain villages in North American and Europe with walkable, interconnected streets and is made up of boutique hotels, condominiums, townhomes, small single family lots and "nests" making it the most diverse development area at the Resort.

CHANGED PAGE TITLE

REMOVED ILLUSTRATIVE BACKGROUND

CROPPED PLAN FOR PLAN AREA ONLY

LABELED "EXISTING" LIFTS

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

DEVELOPMENT DATA

HOTELS	500 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	100,000 SF
RETREATS	90 ROOMS
RESIDENTIAL	604 UNITS

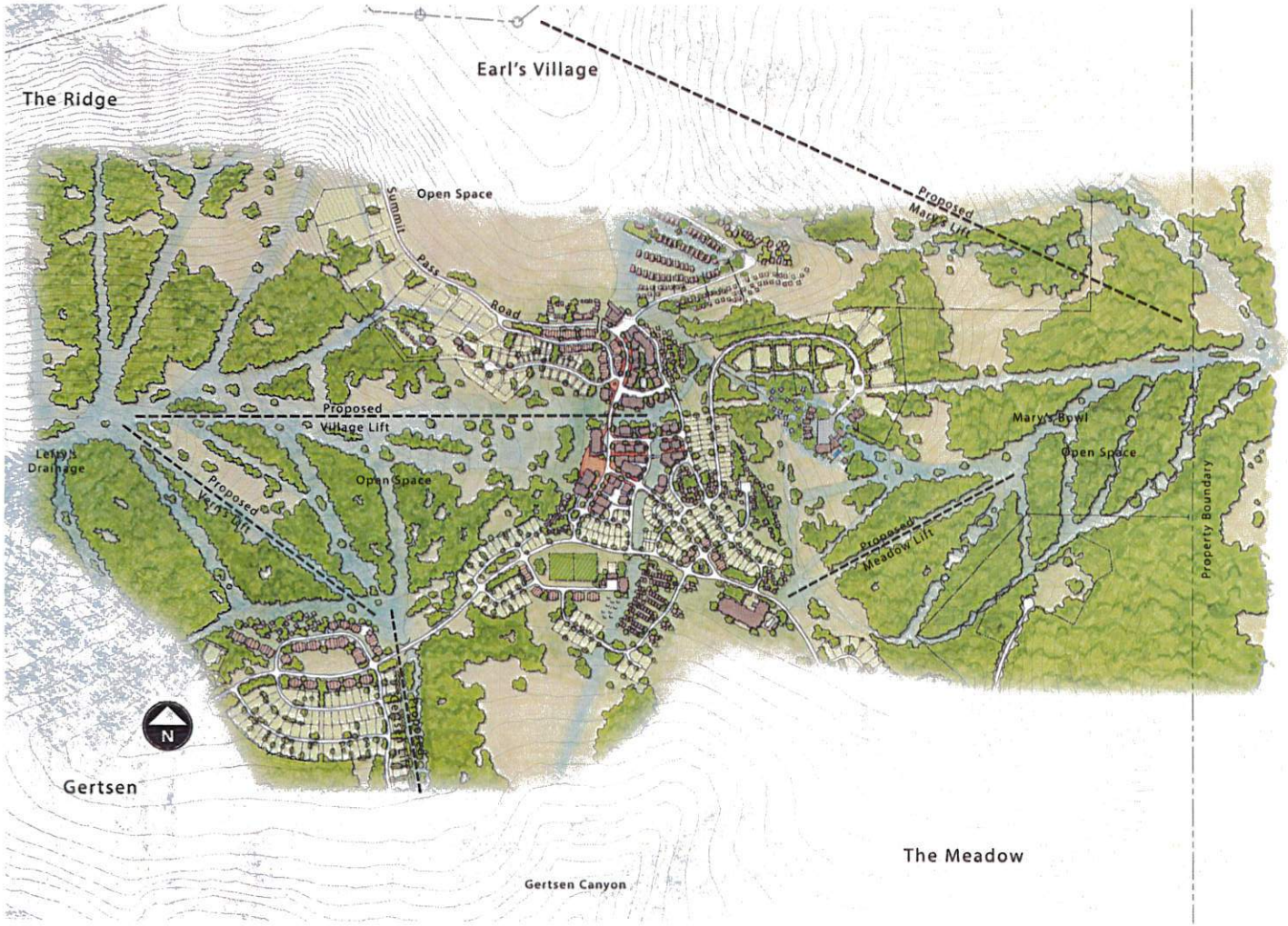
KEY MAP

Exhibit A
Existing plan with changes noted

Summit Powder Mountain Village Illustrative Plan

REMOVED EXHIBIT

The heart of the Summit Powder Mountain Village is Main Street. Main Street will be comprised of boutique hotels and shops, residential lofts over retail, various lodges and amenities all focused around vibrant pedestrian streets littered with public spaces and access to the abundant outdoors. The Summit Powder Mountain Village was located to provide access to three drainages from its core; East to Mary's Bowl, South to Gertsen Canyon and West to Lefty's while also positioning this diverse development area to be in the least visually sensitive area on the mountain.



KEY MAP

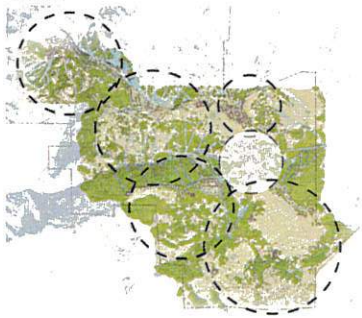
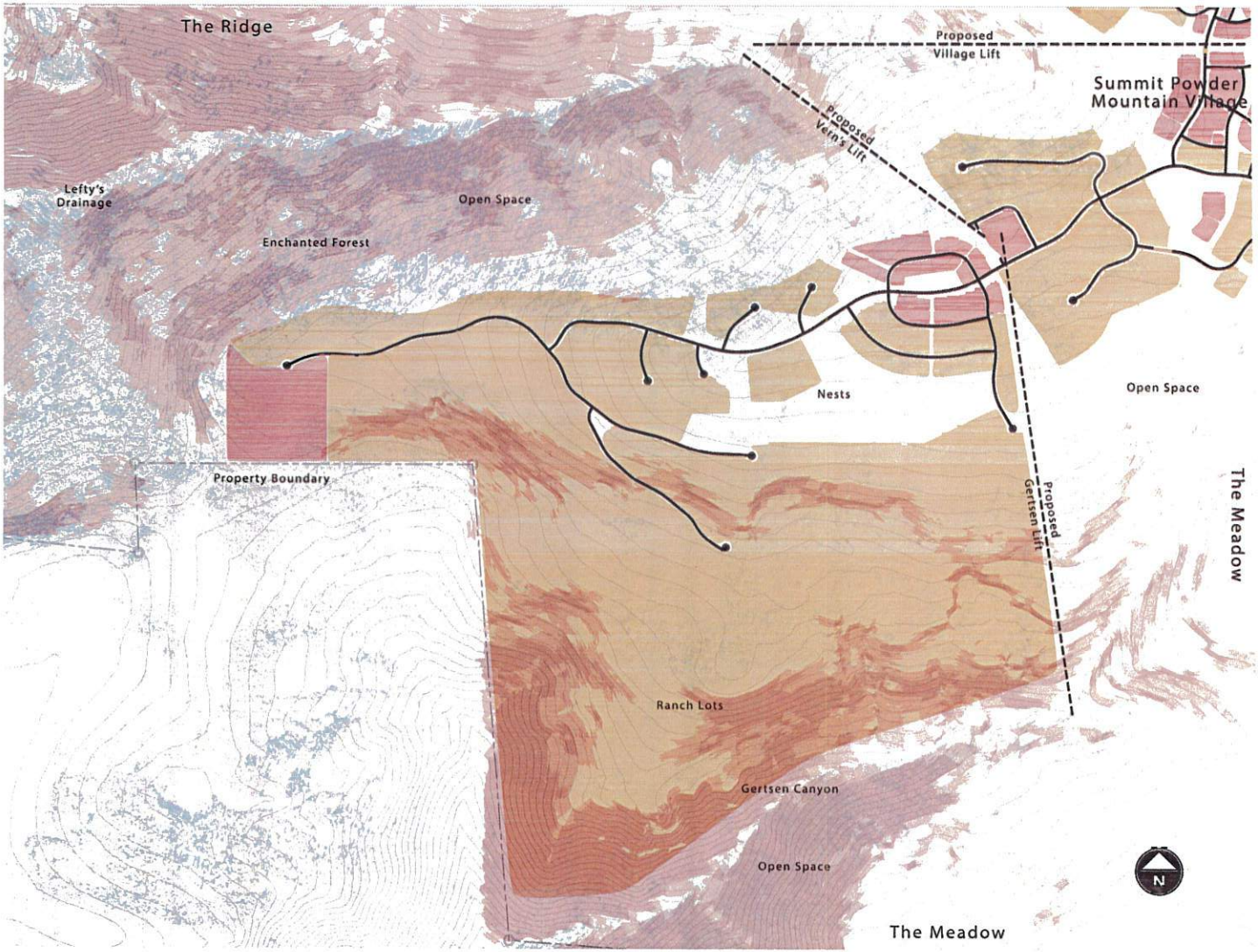


Exhibit A
Existing plan with changes noted

Gertsen Slope Map & Aerial Photo

REMOVED EXHIBIT



The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

SLOPE LEGEND

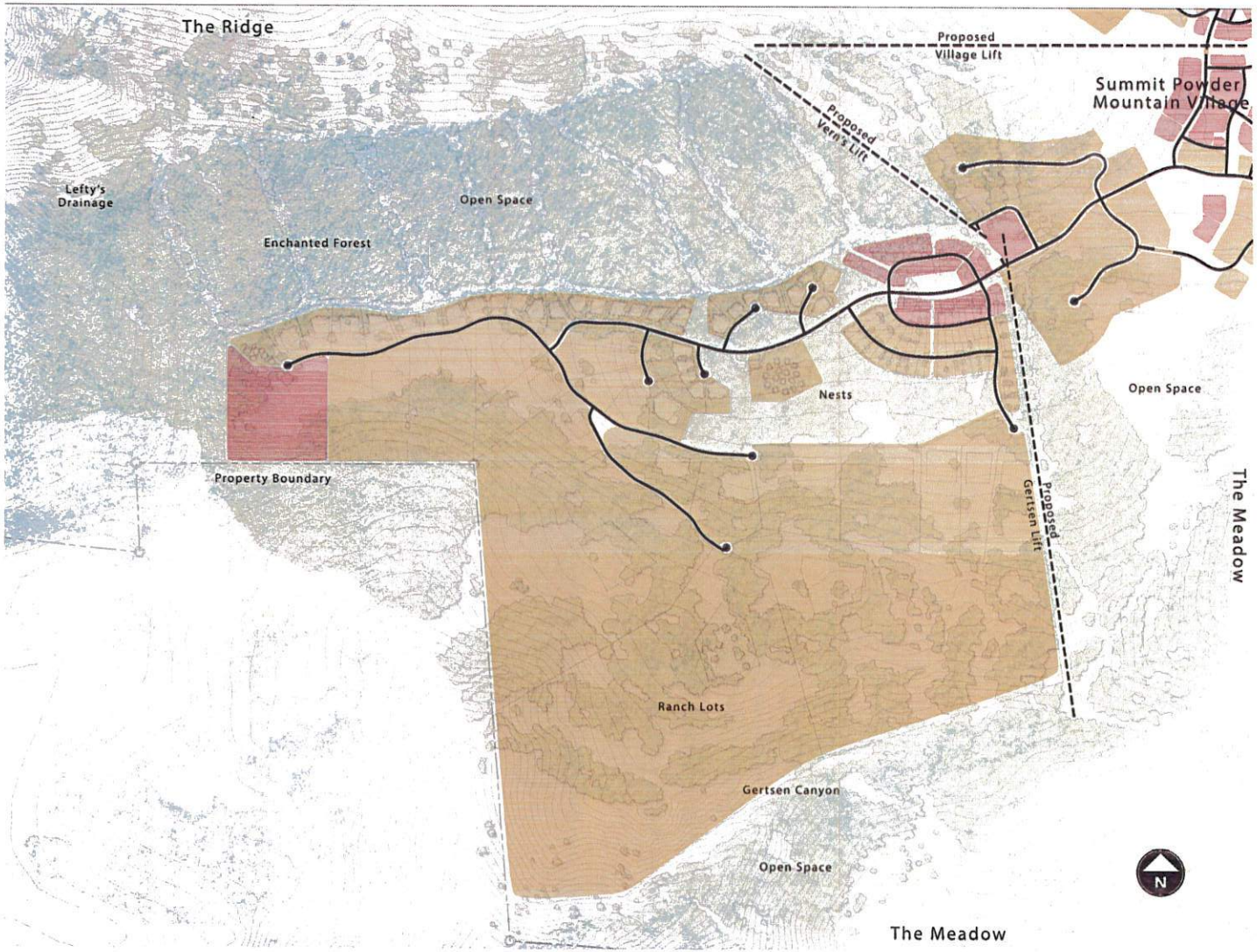
SLOPES 30-40%

SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

Gertsen Master Plan



The Gertsen development area transitions from the more dense Earl's and Summit Powder Mountain Villages to less intense multi family and single family units as the project moves to the project boundary. A small, organized node of multi family townhomes, "nests" and smaller lot single family units anchor the top terminals of the proposed Vern's and Lefty's lifts with lots getting progressively larger as you move west and down the hill. Here larger estate and ranch lots are tucked into large expanses of aspens and along the edge of the Enchanted Forest.

CHANGED PAGE TITLE

REMOVED ILLUSTRATIVE BACKGROUND

CROPPED PLAN FOR PLAN AREA ONLY

LABELED "EXISTING" LIFTS

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

DEVELOPMENT DATA

HOTELS	60 ROOMS
RESIDENTIAL	243 UNITS

KEY MAP

Exhibit A
Existing plan with changes noted

Gertsen Illustrative Plan

REMOVED EXHIBIT

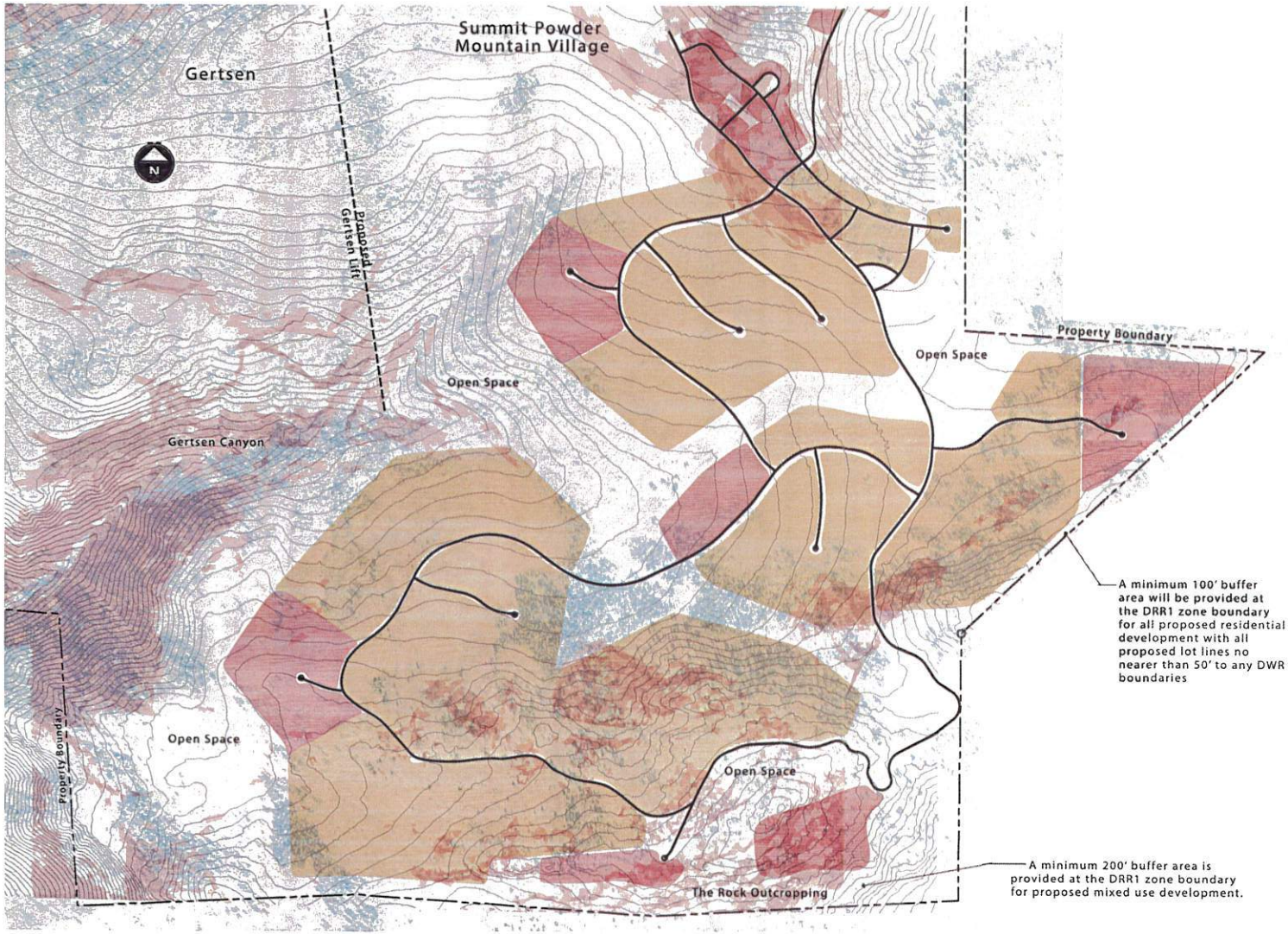
The Gertsen development area straddles the south edge of Lefty's drainage and sits just above the Gertsen Canyon and is heavily wooded with aspen providing a unique setting with southern exposure and views to Mount Ogden. The top terminals of the proposed Vern's and Gertsen lifts provide the recreational and density node for the development area. This ski node provides access to Lefty's, Gertsen Canyon and to the Summit Powder Mountain Village via the Village Lift.

KEY MAP

Exhibit A
Existing plan with changes noted

The Meadow Slope Map & Aerial Photo

REMOVED EXHIBIT



The map exhibit identifies the proposed development areas in relation to existing slopes and existing vegetation. Development areas have generally been placed on those slopes below 30%.

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

SLOPE LEGEND

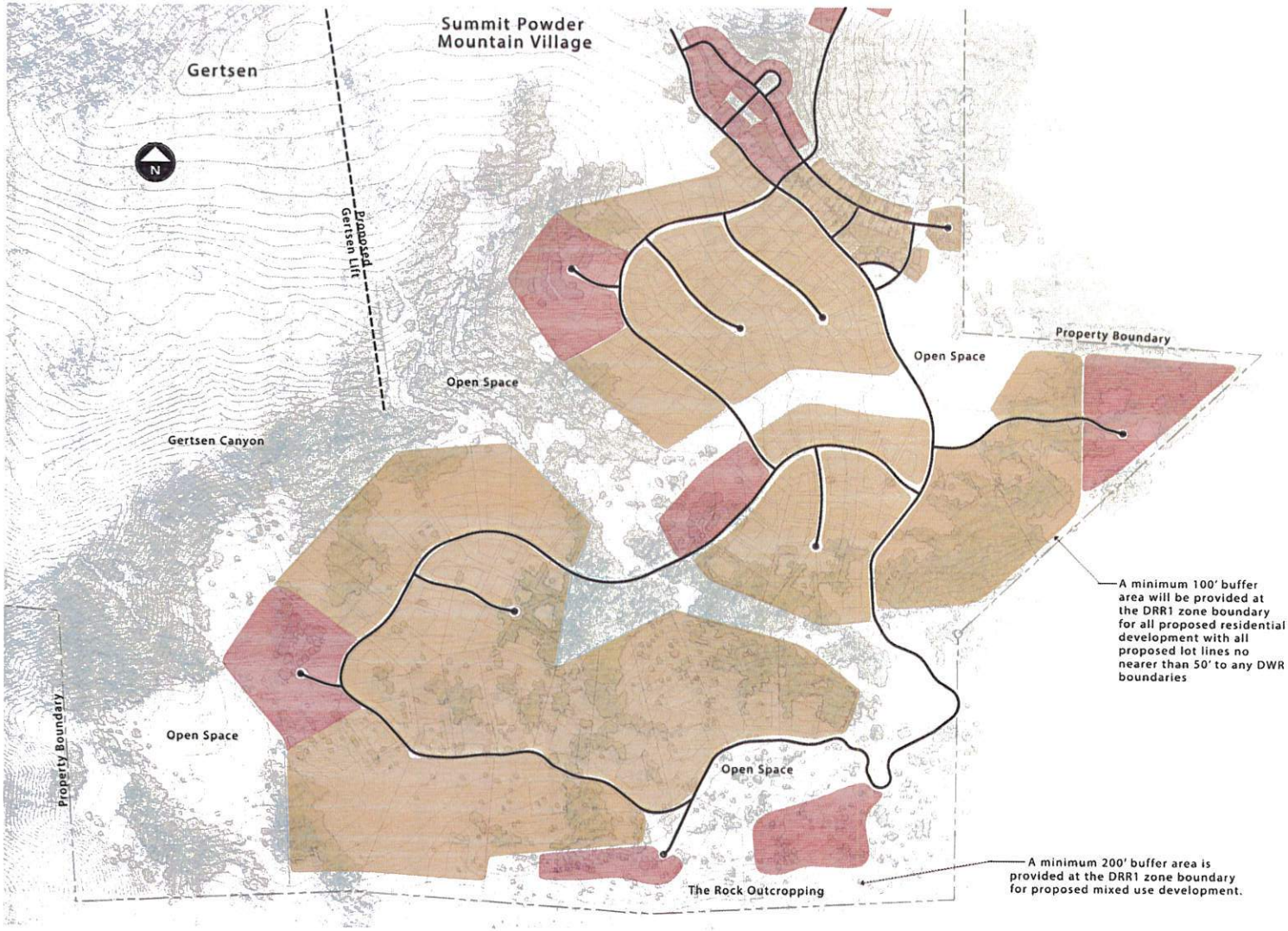
SLOPES 30-40%

SLOPES 40% AND ABOVE

KEY MAP

Exhibit A
Existing plan with changes noted

The Meadow Master Plan



The Meadow Master Plan transitions density from the most dense area of Summit Powder Mountain Village to the project's south edge. The north edge of the Meadow development area maintains the structured road and lotting systems found in the Summit Powder Mountain Village but begins to loosen this development pattern thru the meadow and out to the rock outcropping with larger estate and ranch lots. The south edge of the development area is a location identified for a small, exclusive boutique hotel and retreat providing a destination anchor to the resort with views overlooking the Ogden Valley and Mount Ogden.

CHANGED PAGE TITLE

REMOVED ILLUSTRATIVE BACKGROUND.

ADDED NOTE FOR MIXED USE ON CUL-DE-SAC.

DEVELOPMENT LEGEND

- MIXED USE
- RESIDENTIAL

DEVELOPMENT DATA

HOTELS	130 ROOMS
RETREATS	90 ROOMS
RESIDENTIAL	359 UNITS

KEY MAP

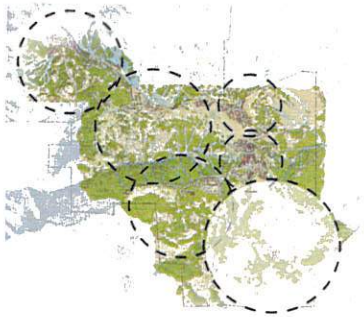
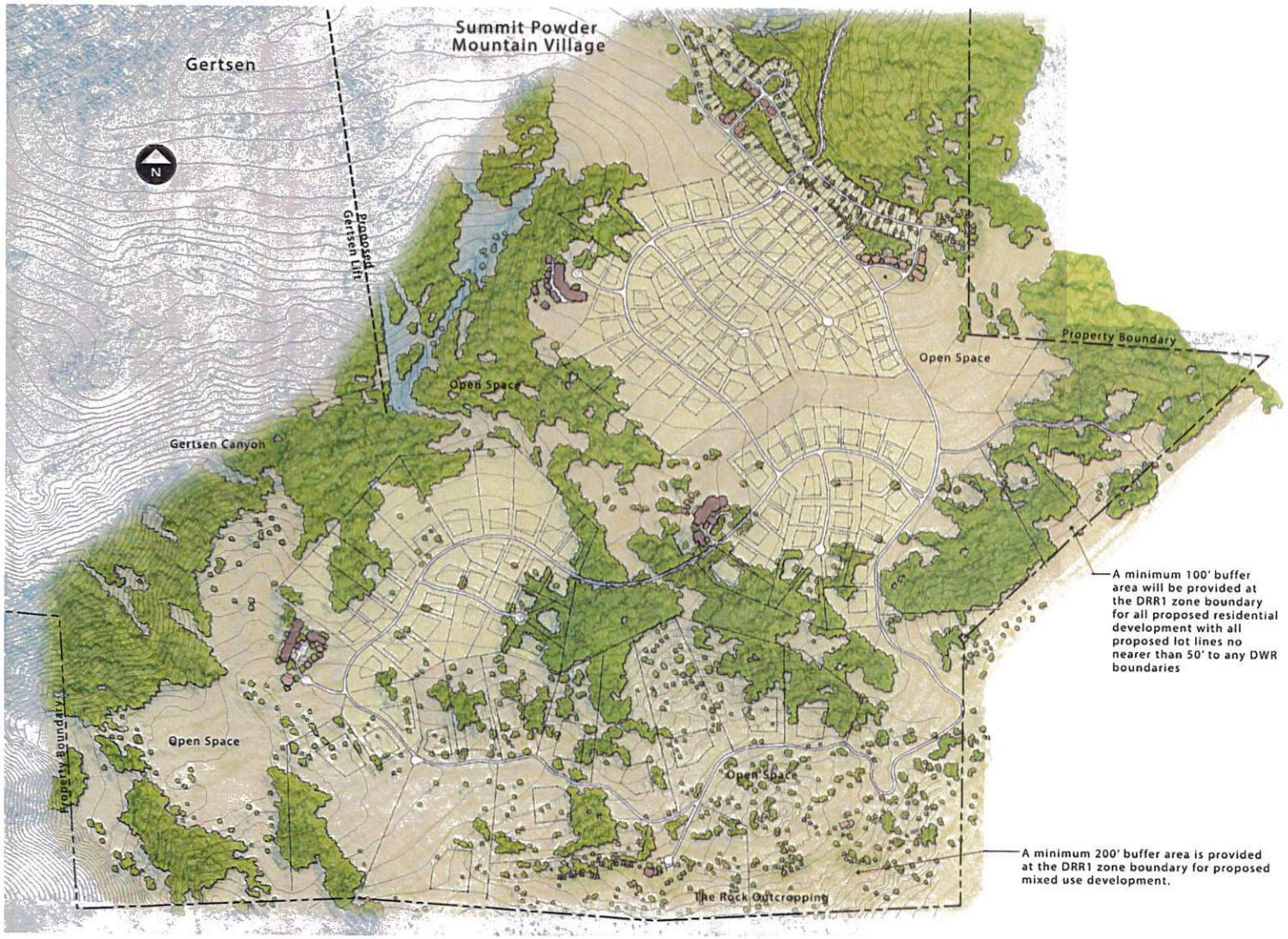


Exhibit A
Existing plan with changes noted

The Meadow Illustrative Plan

REMOVED EXHIBIT

The Meadow comprises a mix of townhomes and small to large single family homes that stretch from the south edge of Summit Powder Mountain Village to the dramatic Rock Outcropping at the south project boundary. Gertsen Canyon provides open space and trail access for all units within the development linking the Ogden Valley to the Resort.



KEY MAP

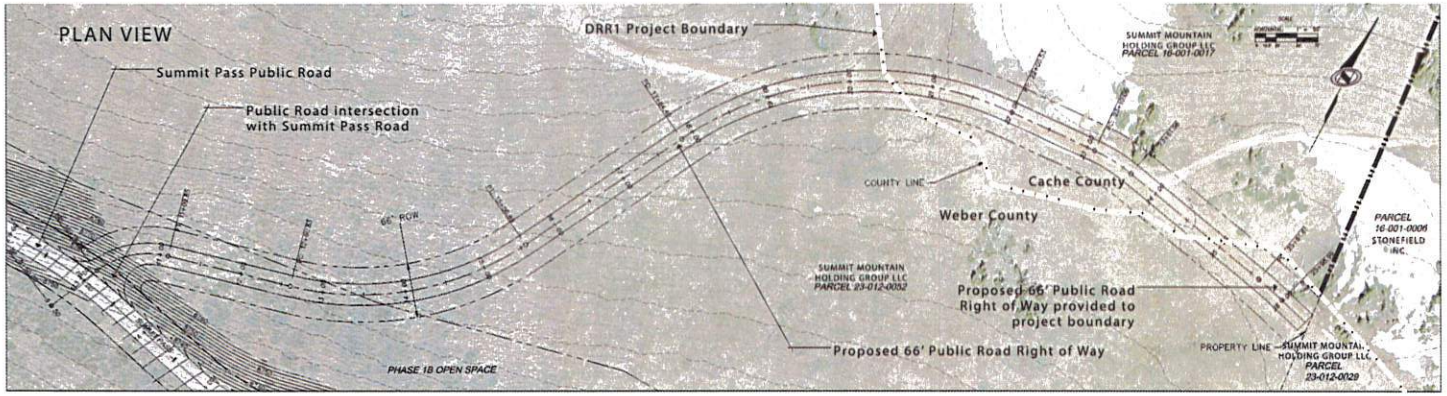
Exhibit A
Existing plan with changes noted

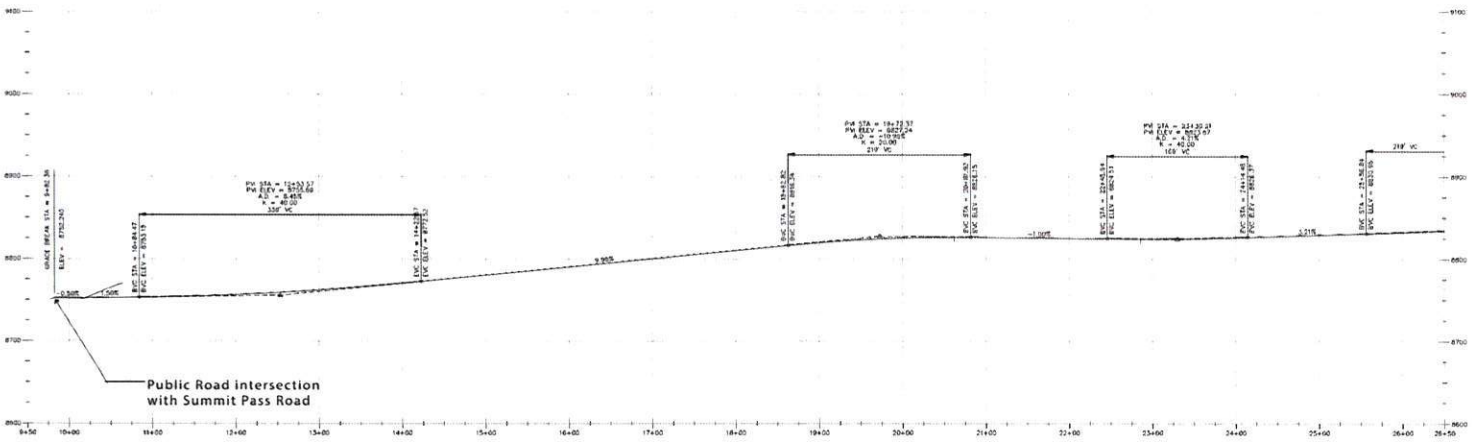
Public Roadway Access

NO CHANGES

Powder Mountain is committing to a public road right of way that will enable a secondary roadway link thru the resort to the east via Cache County. This public access road right of way would utilize Powder Mountain Road, Summit Pass and this proposed roadway to provide a feasible point of connection for a future roadway access to the east. Prior to any right-of-way dedication, Developer and the County shall agree on the maintenance of the right-of-way.

This stub is being provided at a point adjacent to the Stonefield, Inc. parcel within Cache County and is stubbed at a location with topography that is feasible for a roadway extension. Any roadway alignment provided further east of this point is off of the subject property and would therefore require those property owners to provide access. This access extension, design, location etc. is to be determined at a later date and is not part of this rezone application.



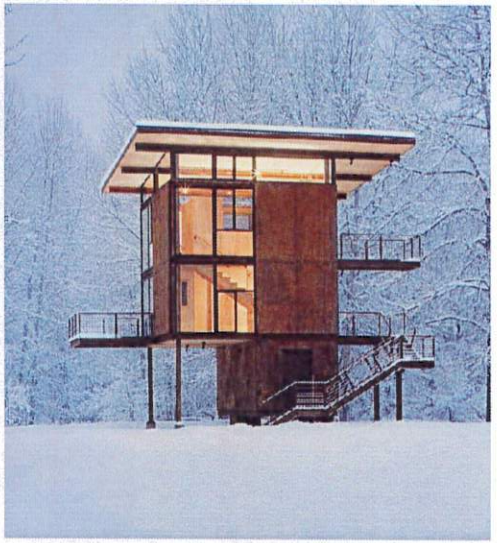


ROADWAY PROFILE

KEY MAP

Exhibit A
Existing plan with changes noted

Architectural Precedents: Nests



NO CHANGES

The Summit community shares a philosophy of innovation, creativity, cultural enrichment and environmental conservation. At Powder Mountain, those core principles come to life in a mountain development of single-family home sites, clusters of nests and a lively village center on 6,160 acres of untouched land in the Wasatch mountain range. Homes will be tucked in clusters of pine and aspen trees to maintain natural views for all community members and The Village will be dense with living accommodations to allow for more open space in wildlife-sensitive areas. Each building design will meet recognized environmental standards and energy conservation guidelines will be provided to incorporate cutting-edge sustainability systems and materials. Buildings will incorporate broad roof lines and indoor-outdoor spaces and will emphasize natural materials, like stone and wood, that suit the local landscape. This modern mountain design aesthetic is essential and should be interpreted with innovation and creativity to add value to the community.

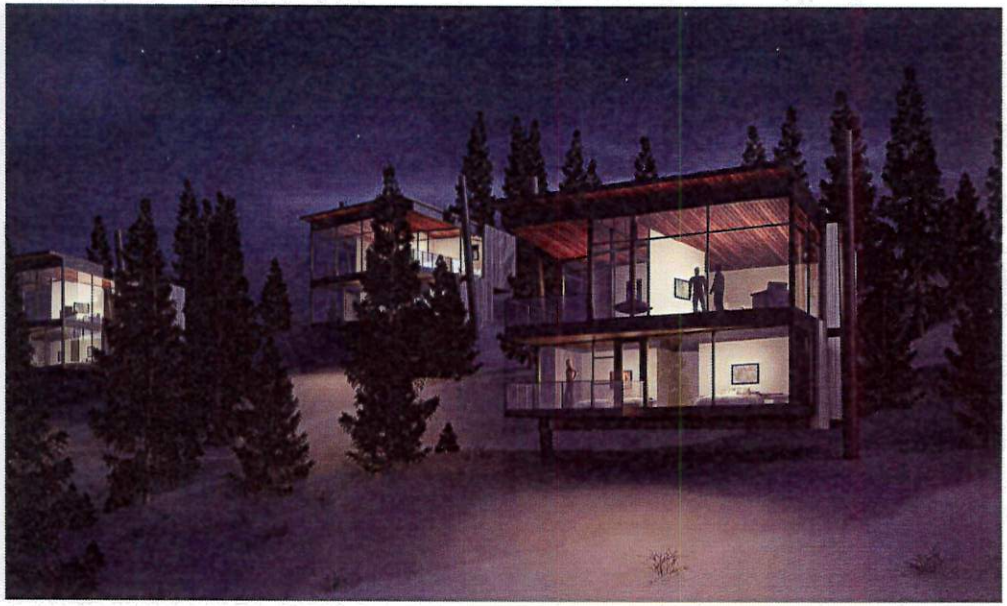
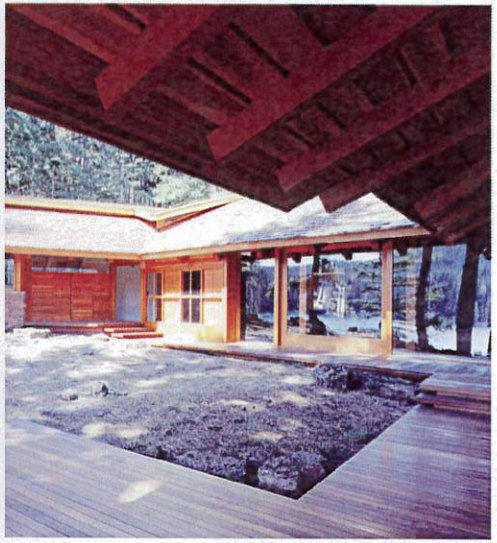


Exhibit A
Existing plan with changes noted

Architectural Precedents: Mountain Houses



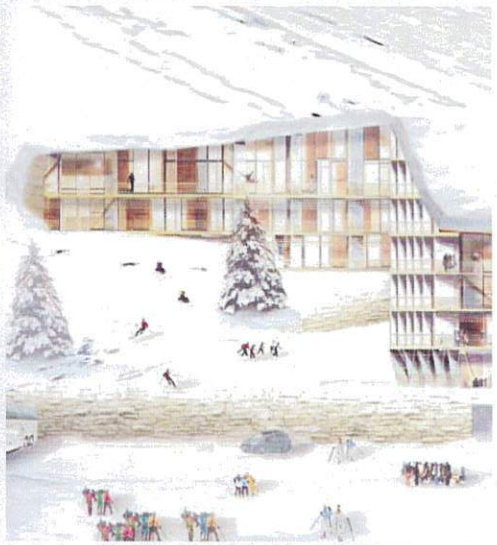
NO CHANGES

Building design at Powder Mountain will preserve the pristine views and natural beauty while creating an identifiable and cohesive modern mountain design aesthetic. "Modern mountain" is intentionally open-ended in its definition. While designers and architects will adhere to specific site, landscape, massing and sustainability requirements, the architectural guidelines are considered an ethos and to be applied with innovation and creativity.

Architecture is subservient to the natural landscape. Fenestration open to mountain views should be enhanced by building and site design. The land and its magnificent panoramas shall remain the dominant design feature, and improvements are not to detract from the site's natural surroundings. Buildings should maintain a low profile and are to be sited to minimize grading by following the natural undulation of the topography. Building masses and articulation are to create shadow, texture, and patterns that help buildings recede into the landscape rather than dominate it.

Exhibit A
Existing plan with changes noted

Architectural Precedents: Hotels & Commercial



NO CHANGES

Building and landscape materials will be used that are natural in appearance and available locally or regionally. All houses and landscape structures at Powder Mountain are to be built of materials that appear to have been taken from the site and/or nearby resources in order to reinforce the connection between buildings and their natural surroundings.

All buildings, site landscaping and construction at Powder Mountain should be healthy, durable, restorative, and a complement to the natural landscape. The design of the site and buildings must incorporate sustainable building design and construction practices, including: utilization of renewable and highly efficient energy systems, green building materials, recycling of construction waste, utilization of natural day lighting and water conservation measures.

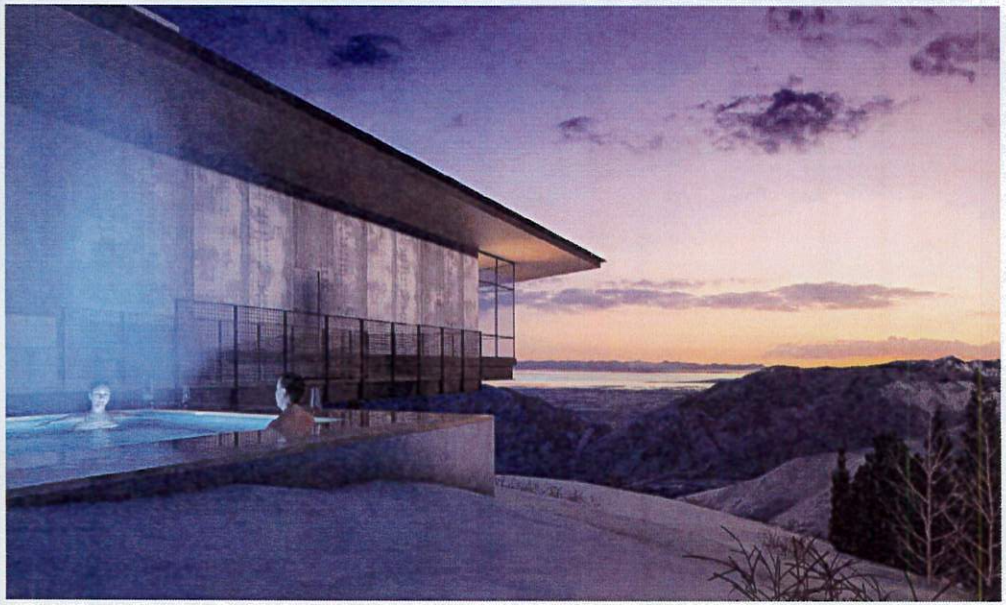
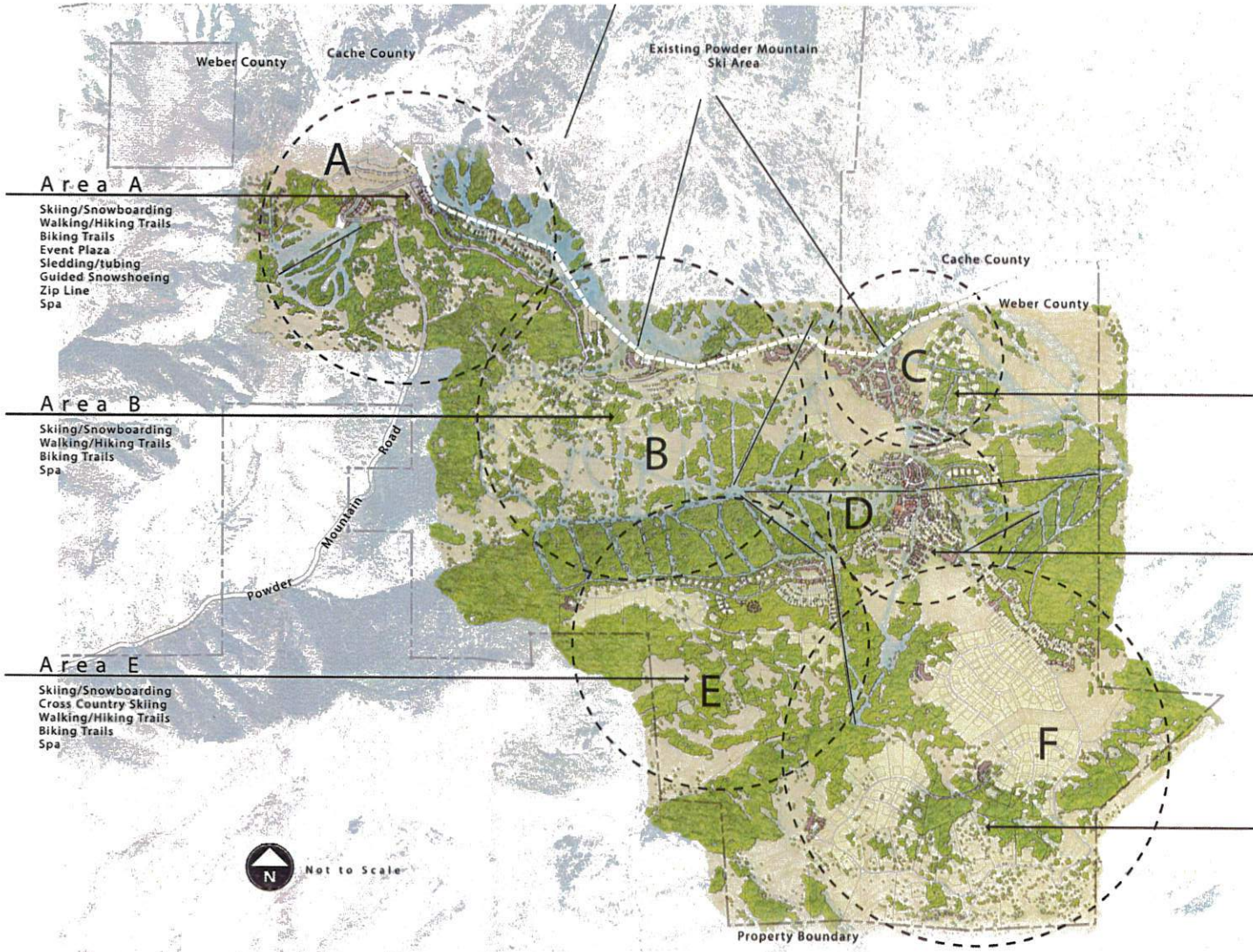


Exhibit A
Existing plan with changes noted

Recreation Plan



Area A

Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Event Plaza
Sledding/tubing
Guided Snowshoeing
Zip Line
Spa

Area B

Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Spa

Area E

Skiing/Snowboarding
Cross Country Skiing
Walking/Hiking Trails
Biking Trails
Spa

The Powder Mountain Master Plan offers a wide variety of recreational activities for its residents, visitors and the local community. Each area offers different amenities and activities based on the identity, location and needs of that particular community. For example, Area A offers predominantly mountain-based amenities while Area F offers more passive recreational activities including trails. Multi-use trails meander throughout the entire property's open space and cater to walking, hiking, mountain biking, snowshoeing and equestrian uses. All Recreation Facilities are available to the public. Some uses will be fee based such as skiing, guided events, spas, etc.

Uses will be phased with the related development area phasing.

Area C

Skiing/Snowboarding
Kite Boarding
Walking/Hiking Trails
Biking Trails
Equestrian Trails
Events Plaza
Ice Skating
Spa

REMOVED ILLUSTRATIVE BACKGROUND AND REPLACED WITH OVERALL LAND USE PLAN

Area D

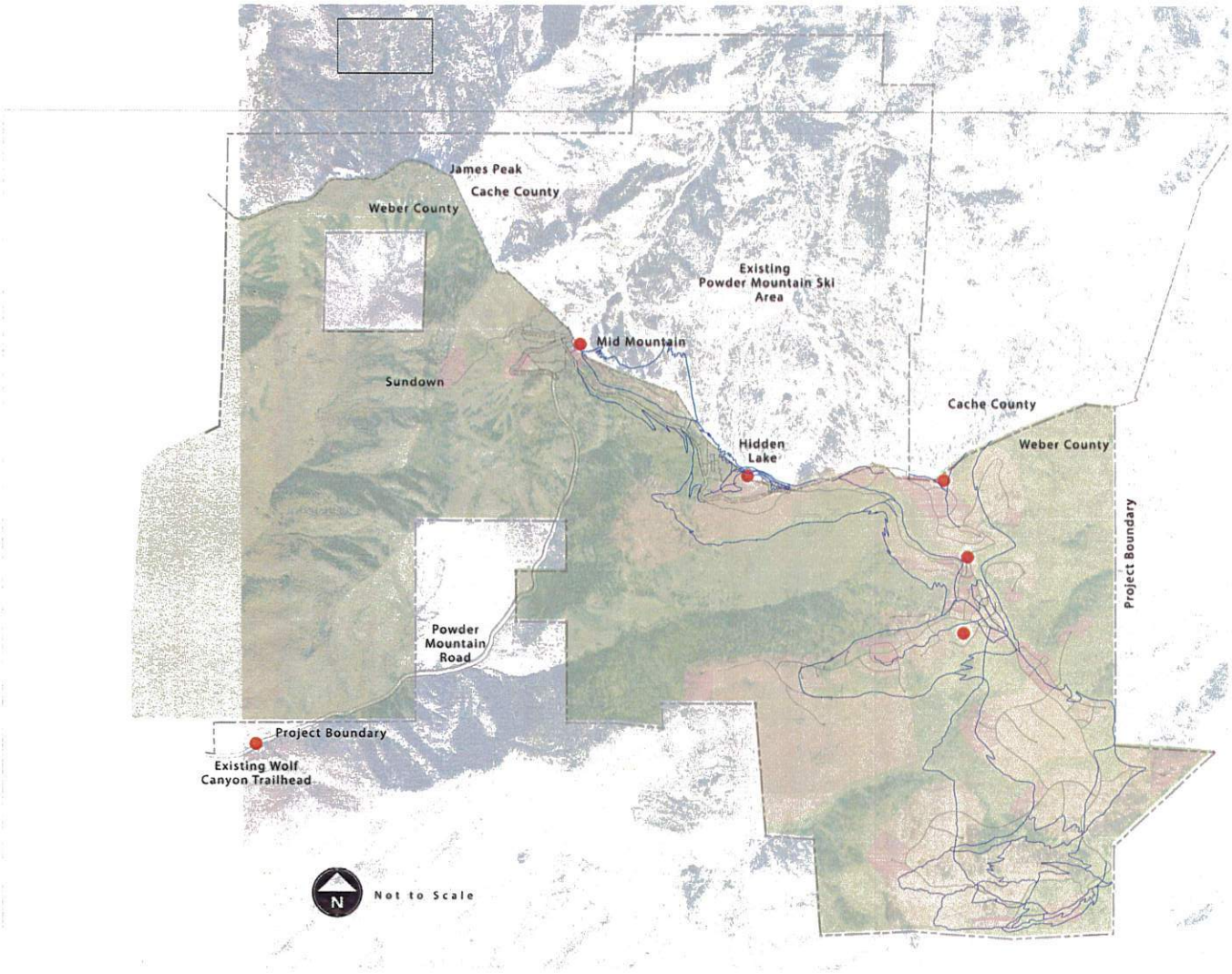
Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Kid's Camp
Event's Plaza
Guided Snowshoeing
Ice Skating
Amphitheater
Sledding/tubing
Swimming
Indoor Recreation Facility
Zip Line
Geo-caching
Spa

Area F

Walking/Hiking Trails
Cross Country Skiing
Biking Trails
Equestrian Facility
Equestrian Trails
Adventure Course
Spa

Exhibit A
Existing plan with changes noted

Open Space with Trails Plan



The Open Space and Trails System diagram illustrates project trails that will connect neighborhoods to one another and to the regional trail network. Powder Mountain is committed to providing Regional Public Trail Connectors thru the project (shown in blue) to insure public trail access to and thru the project. Powder Mountain will work with the adjacent landowners, UDWR and Weber Pathways to provide these connections. A priority has been placed on creating loops within the project. The loop trails shown (in Green) were developed in conjuction with Weber Pathways and the International Mountain Biking Association to provide beginner level trail loops as shown. In addition, there will be a variety of trails within and around each development area that will include multi-use trails, single-track for mountain biking and general use trails for walking and hiking.

OPEN SPACE CALCULATION

Approximately 6,160 acres of the Powder Mountain property are located in Weber County. In Weber County, approximately 76 percent (4,740 acres) of the total land has been preserved as total open space. In order to calculate the open space per the DRR1 zone requirements, the approximate 2,100 acres that have slope more than 40 percent were subtracted from the total acres, resulting in an Adjusted Gross Acreage of approximately 4,060 acres. Development is planned on approximately 1,500 acres, leaving 2,560 acres or 63% of the Adjusted Gross Acreage preserved as open space.

DEVELOPMENT LEGEND

- MIXED USE
- OPEN SPACE
- RESIDENTIAL
- INTERNAL PUBLIC LOOP TRAILS
- TRAILHEAD OR ACCESS NODE

UPDATED OVERALL LAND USE PLAN WITH TRAILS

Exhibit A
Existing plan with changes noted

Seasonal Workforce Housing Plan

NO CHANGES

Uses	# Employees Generated	Per Room/SF	Source
Resort Operations			Powder Mountain Ops
Hotel	0.7	1 Room	Canyons
Multi Family & Nests Rental	0.3	1 Room	Canyons
Retail	2	1,000 SF	Weber County DRRO
Office	2.3	1,000 SF	Weber County DRRO
Restaurant/Bar	3.5	1,000 SF FF	Weber County DRRO
Estimated # of Employees in WF housing Unit	1.65		Weber County DRRO
Required # of Seasonal WF Housing Units	0.1		Weber County DRRO

Phase 1 - 1,477 Units

Uses	Total Rooms or SF	% in Rental Pool	Rental Units	FTEE Employees Gen.	Emps/WF Unit (/1.65)	Required # Units (10%)
Hotel	818	-	-	573	347	35
Multi Family & Nests Rental	656	50%	328	98	60	6
Retail	75,000	-	-	150	91	9
Office	19,000	-	-	44	26	3
Restaurant/Bar	25,000	-	-	88	53	5
			Totals	952	577	58

Overall - 2,800 Units

Uses	Total Rooms or SF	% in Rental Pool	Rental Units	FTEE Employees Gen.	Emps/WF Unit (/1.65)	Required # Units (10%)
Hotel	1,218	-	-	853	517	52
Multi Family & Nests Rental	1,596	50%	798	399	242	24
Retail	100,000	-	-	200	121	12
Office	29,000	-	-	67	40	4
Restaurant/Bar	30,000	-	-	105	64	6
			Totals	1623	984	98

Employee generation at Powder Mountain has been calculated according to the formula in the Destination and Recreation Resort Ordinance. It is estimated that a total of 1,623 full time equivalent employees (FTEE) will be generated by Powder Mountain at full build out with 960 FTEE projected for the proposed Phase 1 development . These workforce additions will primarily be located within the Earl's Village and Summit Powder Mountain Village but will include employees servicing communities throughout the project. Only those employees generated due to development within Weber County have been calculated as part of this plan.

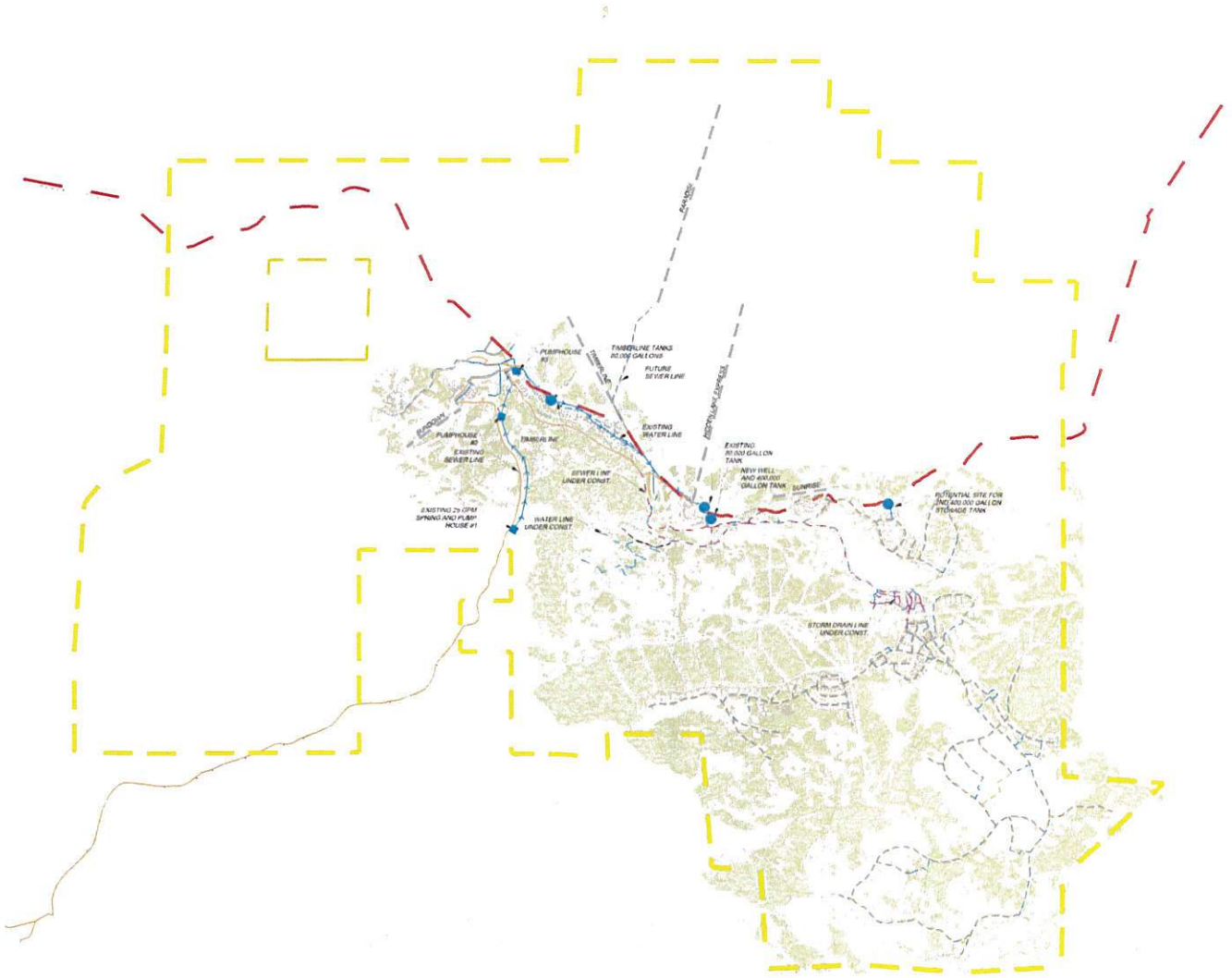
At full build out, Powder Mountain will generate the overall need for 984 workforce housing units and will be required to provide approximately 98 of these workforce housing units. These housing units may be provided in the form of group dwelling (dormitories) or multi-family dwelling (condominiums/townhomes) within the Resort, and will be phased with development. Conceptually, the seasonal employees will be housed in the Mid Mountain and Summit Powder Mountain Village Areas, as identified on the proposed Powder Mountain Master Plan, nearest their employment to reduce the need for automobile use. It is estimated that the additional 886 units will be located off-site to support the seasonal workforce housing requirements. With the proximity of Ogden and the Ogden Valley to the resort and the availability of mass transit alternatives and the further development of these mass transit alternatives as per the Traffic Study (Exhibit 2) there exists available seasonal housing options to serve the resorts needs. Additionally, the upper alpine elevation and unpredictable nature of the resorts winter weather makes the Ogden Valley and Ogden ideal for the majority of the employee base to reside on a day to day basis. Here, employees and their families are near to and have reliable access to essential goods and services such and schools and shops.
In order to ensure affordable housing remain available and affordable in perpetuity, the on mountain seasonal workforce housing units will be deed restricted. Upon request, an annual report that outlines the previous year's employment level, workforce housing needs, housing type/availability and occupancy will be generated and presented to Weber County Planning Staff.

Exhibit A
Existing plan with changes noted

Wet Utilities Overview

NO CHANGES

The wet utilities diagram illustrates the existing and proposed water, wastewater and storm drain infrastructure on site at Powder Mountain. The majority of the existing infrastructure is located in and around the mountain operations including the Mid Mountain and Hidden Lake areas



LEGEND

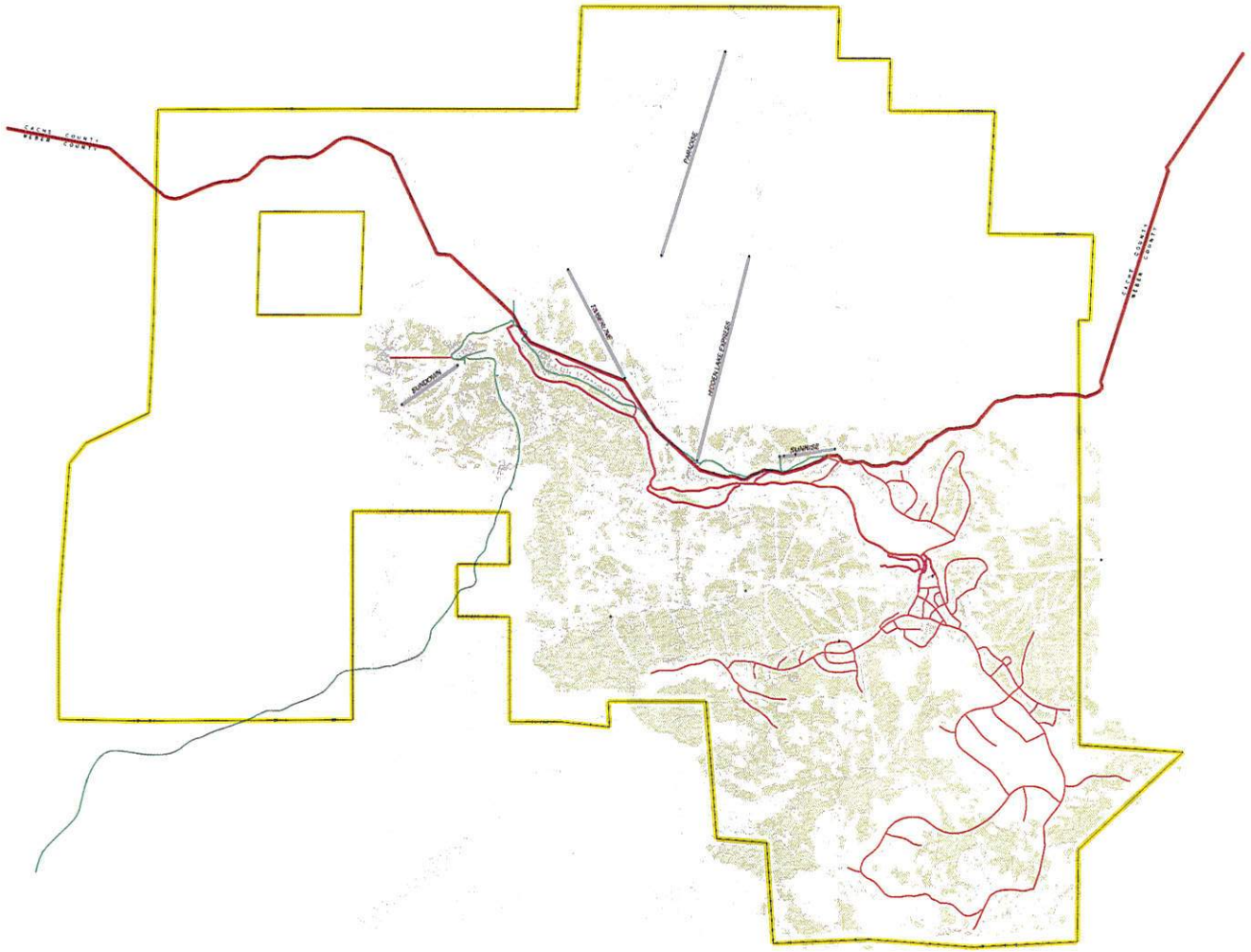
- COUNTY LINE
- PROPERTY BOUNDARY
- EXISTING SKI LIFT
- FUTURE SKI LIFT
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN LINE
- EXISTING WATER LINE
- SANITARY SEWER LINE (FUTURE)
- STORM DRAIN LINE (FUTURE)
- WATER LINE (FUTURE)
- SANITARY SEWER LINE (UNDER CONSTRUCTION)
- STORM DRAIN LINE (UNDER CONSTRUCTION)
- WATER LINE (UNDER CONSTRUCTION)

Exhibit A
Existing plan with changes noted

Dry Utilities Overview

NO CHANGES

The existing and proposed dry utilities map illustrates the on and off-site power, gas and communications infrastructure at the Powder Mountain Resort.



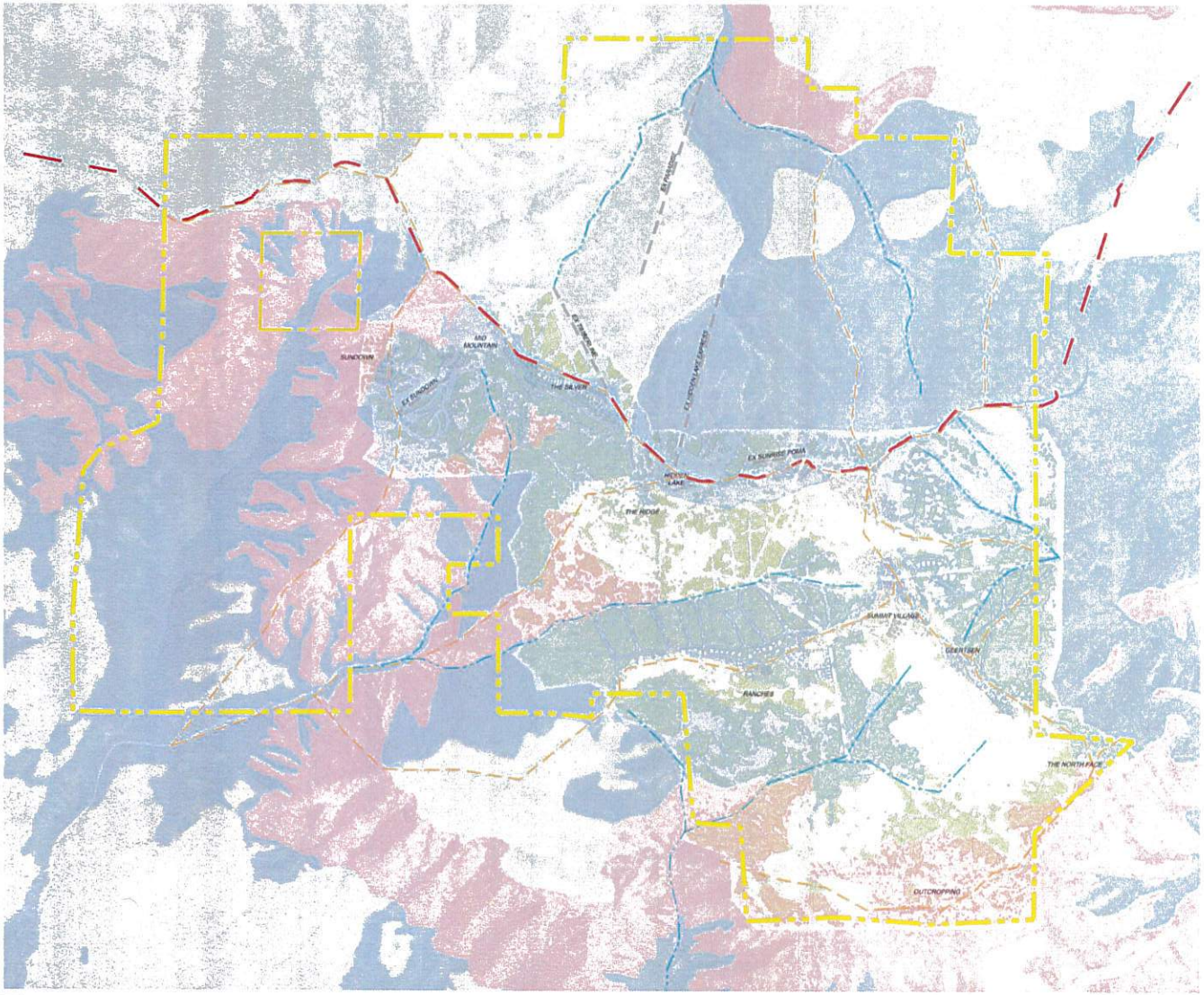
LEGEND

- COUNTY LINE
- PROPERTY BOUNDARY
- EXISTING SKI LIFT
- EXISTING POWER LINE
- FUTURE POWER LINE
- FUTURE COMMUNICATION LINE

Exhibit A
Existing plan with changes noted

Conceptual Stormwater System

NO CHANGES



LEGEND

- COUNTY LINE
- PROPERTY BOUNDARY
- EXISTING SKI LIFT
- FUTURE SKI LIFT
- DRAINAGE BASIN BOUNDARY
- DRAINAGE CHANNEL

HYDROLOGIC SOIL GROUPS

- B
- C
- D

SCALE

Exhibit A
Existing plan with changes noted

NO CHANGES

2023 W. 1300 N.
Farr West, UT 84404
(801) 782-3580
Fax (801) 782-3582

July 2, 2014

Rick Everson
Watts Enterprises
5200 South Highland Drive, STE 101
Salt Lake City, Utah 84117

RE: Will Serve Notice

The project at the Powder Mountain area includes multiple phases of development with the potential of 2,800 residential units. The project area is within the jurisdictional boundaries of the Weber Fire District. Weber Fire District currently has two fire stations located in the Upper Valley area that have been and will continue to serve the Powder Mountain area. The closest station to the project site is Station 62, located at 5550 East 2200 North, Eden. Weber Fire District will serve the project area from these two locations supported by units from the lower valley.

When the number of residences and/or commercial structures warrants it; or when the number or incidents in the new developed area warrants it, a new fire station facility may be needed to serve the area. If the build-out reaches its full potential, a fire station in the area will most likely be needed. It would be wise of the developer to consider this and to work with the Fire District regarding response for emergency medical and fire related emergencies.

The development will be required to meet all applicable codes and rules, including fire codes.

If you have further questions, please feel free to contact myself or Chief Austin.

Sincerely,

Brandon Thueson
Fire Marshal

Chief, David L. Austin - Deputy Chief, Paul Sullivan - Fire Marshal, Brandon Thueson

Weber County Sheriff's Office

Terry L. Thompson
Sheriff

Klint D. Anderson
Chief Deputy
Law Enforcement Division

Kevin H. Burton
Chief Deputy
Corrections Division

Steffani Ebert
Administrative Assistant
Support Services Division

Law Enforcement Division
(801) 778-6600

Corrections Division
(801) 778-6700

Emergency Management
(801) 778-6680

Office Hours are
Monday through Friday
8:00 a.m. to 5:00 p.m.

721 W. 12th Street
Ogden, Utah 84404
(801) 778-6600
Fax (801) 778-6667

August 6, 2014

Rick Everson
Watts Enterprises
5200 South Highland Drive, Ste 101
Salt Lake City, Utah 84117

RE: Serve Notice

Upon completion, the Powder Mountain Development area will potentially consist of 2800 residential units and commercial properties. The project spans two counties, Weber and Cache. Weber County currently has an agreement with Cache County to provide law enforcement services to the entire area as Cache County has limited access to the area. Currently the Weber County Sheriff's Office has one deputy assigned to the area to handle law enforcement.

With current staffing levels, the Weber County Sheriff's Office would not be able to adequately serve a development of more than a few hundred units. It will be imperative that we work with both the developer and county commissioners, both Weber and Cache, to increase deputy numbers at a rate that is the equivalent to the rate of development.

If you have further questions, please feel free to contact me.

Sincerely,

Sheriff Terry Thompson
Weber County

The Powder Mountain project team met with representatives from the Weber County Sheriff's Office, the Weber Fire District and Emergency Medical Technicians throughout the Master Plan development process including during the approvals for the Phase 1 PRUD process and approval. During these meetings, the full Master Plan concept for Powder Mountain was discussed, as well as potential emergency services facilities and personnel that would be required to support the Project at build out. The Fire Marshal and Sheriff indicated they would need a facility on-site, preferably in a central location to aid in easy access to the entire Resort. The possibility of shared facilities was discussed and a preferred solution by all parties. At this point, it is envisioned that the facility would need to include a sheriff office, one engine, ambulance and brush truck. The Powder Mountain team is committed to the health, safety and welfare of visitors and residents of the Project and will work with the emergency services providers to ensure adequate facilities are on-site in the appropriate size and location. Construction of said facilities will be phased as appropriate depending on development.

Included with this application are feasibility letters submitted by the Fire Marshal and Sheriff.

Exhibit A
Existing plan with changes noted

NO CHANGES

June 12, 2013

Weber County Planning Division
Attn: Commissioner Zogmaister
2380 Washington Blvd, Suite 240
Ogden, UT 84401

Subject: **Feasibility of Using Groundwater to Supply Proposed Development**
Proposed Expansion of Powder Mountain Resort, Weber County, Utah
for Summit Mountain Holding Group

Dear Commissioner

This letter presents my opinion of the feasibility of using groundwater to supply the proposed expansion of the Powder Mountain Resort (Powder Mountain) in Weber County, Utah for Summit Mountain Holding Group (the Summit Group).

I understand the following about available water rights and estimated water demand of the existing and proposed new development at Powder Mountain:

- The Summit Group leases 1,400 acre-feet (ac-ft) of water on an annual basis from Weber Basin Water Conservancy District (Weber Basin) for $276,000 per year.
- Based on the Powder Mountain Water Distribution System Master Plan by NV5, Inc. (NV5, 2013),
  - The existing development at Powder Mountain consists of 123 connections with an estimated annual demand of 55.35 ac-ft and a peak-day demand of approximately 88.56 gallons per minute (gpm);
  - The proposed 154 ERUs of Phase 1 have an annual water demand of 65.25 ac-ft and a peak-day demand of about 81 gpm;
  - The proposed 1,000 ERUs of the assessment area have an annual demand of 252 ac-ft and a peak -day demand of about 314 gpm; and
  - The existing development and proposed 1,000 ERUs of the assessment area have a combined estimated annual water demand of 307.35 ac-ft and peak-day demand of 402.5 gpm.

My opinion of using groundwater to supply the proposed development at Powder Mountain is as follows:

- Potential groundwater recharge on the Weber County side of Powder Mountain is estimated to be about 12,400 ac-ft per year (King, 2004), which is more than adequate to supply the 1,000 ERUs of the assessment area.
- Lefty Spring (see Figure 2), which is currently undeveloped, but could be developed under E4715 (35-1195), has a minimum flow of at least 100 gpm. In addition, Loughlin Water Associates, LLC (Loughlin Water) is inventorying and measuring the flow of several other undeveloped springs at Powder Mountain.
- The Summit Group has elected to supply Phase 1 with wells and is currently drilling and testing exploration wells.
- The DDW requires that a new well (or wells) be tested at 1.5 times the peak-day demand of 81 gpm (about 122 gpm) for a minimum of 24 hours to approve the 154 ERUs of Phase 1.
- The Summit Group has tested an initial exploration well at 79 gpm and plans to permit and construct exploration and production wells as they are needed for future phases of development.
- Based on my review of the local hydrogeology, I believe that the 81 gpm required for Phase 1, the 314 gpm required for all 1,000 ERUs, and the combined demand of 402.5 gpm for the existing development and the 1,000 new ERUs can be developed from wells and springs at Powder Mountain.

Details and supporting information for my opinion are provided in the discussions that follow.

WATER RIGHTS

The primary water right for Powder Mountain, and its anticipated expansion, is a contract with Weber Basin to divert up to 1,400 ac-ft on an annual basis (the Weber Basin contract). The Summit Group pays Weber Basin $276,000 per year for this perpetual lease of water regardless of whether any water is called for or actually used.

On November 3, 2006, the Utah Division of Water Rights (DWRi), also known as "*the Office of the State Engineer*" or "*the State Engineer*," approved exchange application E4715 (35-11995) which allows up to 400 ac-ft of the 1,400 ac-ft, available under the Weber Basin contract, to be diverted from wells and springs at Powder Mountain (the exchange application). The exchange application includes three developed springs (Pizzel Springs #1, #2, and #3) and one undeveloped spring (Lefty Spring) and one existing well (Cobabe Well) and up to 14 new wells. Figure 1 shows the location of Powder Mountain and Figure 2 shows the locations of the existing and proposed springs and wells at Powder Mountain.

Exchange application E4715 (35-11995) allows water to be used to supply Powder Mountain and related development served by Powder Mountain Water & Sewer Improvement District (PMWSID). A new exchange application will need to be filed and approved by the DWRi to (1) allow the remaining 1,000 ac-ft available under the Weber Basin contract to be diverted and used at Powder Mountain and/or (2) ade additional springs or wells at Powder Mountain.

WATER DEMAND

According to NV5, Inc. (NV5, 2013):

- Phase 1 of the proposed expansion of Powder Mountain consists of 154 ERUs with an average annual demand of 65.25 ac-ft and the peak-day demand of about 81 gpm. Phase 1 combined with the existing connections will have an average annual demand of 120.6 ac-ft and peak-day demand of 169.5 gpm.
- The 1,000 ERUs proposed for the assessment area have an average annual demand of 252 ac-ft and peak-day demand of 314 gpm. All 1,000 ERUs combined with the existing connections will have an average annual demand of 307.35 ac-ft and peak-day demand of 402.5 gpm.

The 400 ac-feet of exchange application E4715 (35-11995) is more than adequate to supply the 1,000 ERUs of the assessment area of Powder Mountain.

GROUNDWATER RECHARGE

King (2004) subdivided the Powder Mountain area into eight surface water sub-basins. Most of the existing and proposed wells and springs of exchange application E4715 (35-11995) are located within or near the edge of the Wolf Creek drainage. Proposed wells 7 and 8 are in the Middle Fork of the Ogden River drainage and Proposed Well 14 is in the Geertsen Canyon drainage. King (2004) estimated that the total groundwater recharge from precipitation in these three sub-basins, all of which are on the Weber County side of Powder Mountain, is about 12,400 ac-ft per year. Groundwater recharge includes: (1) 1,960 ac-ft/yr in the Wolf Creek drainage, (2) 9,380 ac-ft/y in the Middle Fork of the Ogden River drainage, and (3) 1,100 ac-ft/yr in the Geertsen Canyon drainage.

The estimated total potential groundwater recharge on the Weber County side of Powder Mountain of 12,400 ac-ft is more than adequate to supply both (1) the 400 ac-ft that can currently be diverted under exchange application E4715 (35-11995) and (2) the additional 1,000 ac-ft of the Weber Basin contract that has not been transferred to Powder Mountain.

TARGET AQUIFERS

Paleozoic-age carbonate rocks (limestone and dolomite) and, to a lesser degree, quartzite rocks, are the primary target aquifers and potential sources of groundwater for Powder Mountain. Potential target aquifers, located on the Weber County side of Powder Mountain, include the Nounan Formation, the Middle Limestone Member of the Bloomington Formation (Middle Limestone Member), the Blacksmith Dolomite, Langston Dolomite, Geertsen Quartzite, and Mutual Formation. These geologic units, where sufficiently fractured and saturated (located below the water table), produce significant quantities of groundwater to wells and springs in neighboring areas of northern Utah.

Because the primary porosity and permeability of the bedrock at Powder Mountain is relatively low, the potential yields of wells will depend, in part, on intercepting zones of secondary porosity and permeability associated with partings along bedding surfaces, fractures, and dissolution features. Limestone dissolves more readily than dolomite and tends to develop greater solution-enhanced permeability. The Middle Limestone Member is the primary target aquifer because this unit (1) contains a greater thickness of limestone than the other units and (2) is overlain in most areas by the low-permeability Calls Fort Shale.

Principal aquitards (confining layers), which separate the aquifers and create stratigraphic groundwater compartments, include the Calls Fort Shale and Hodges Shale members of the Bloomington Formation and the Ute Formation. Note however, that all three of the low-permeability units have interbeds of limestone and/or dolomite that can yield water to wells and springs.

The geology of the Powder Mountain area is complex. The Paleozoic-age bedrock, including the target aquifers, has been folded, faulted, eroded, covered with younger geologic layers, and deeply buried. Based on my review of the local and regional hydrogeology, I believe that the target aquifers, where sufficiently fractured and saturated are capable of supplying the average annual and peak-day demand of the 154 ERUs of Phase 1 and the 1,000 ERUs of the assessment area.

EXISTING DRINKING WATER SOURCES

PMWSID currently uses Pizzel Springs #1, #2, and #3 to supply the existing drinking water demand of Powder Mountain. According to PMWSID staff, the combined wintertime low flow of these three springs is about 40 gpm. These three springs discharge from the base of the Langston Dolomite, near the contact with the upper shale confining units of the Ute Formation.

The Cobabe Well was reportedly airlift tested at 100 gpm, has an unmeasured artesian flow, and is currently equipped with a pump capable of producing about 22 gpm. This well is not currently approved by the Utah Division of Drinking Water (DDW) and is not used by the PMWSID as a source of drinking water. The Cobabe Well produces groundwater from the Ute Formation.

GROUNDWATER EXPLORATION AND DEVELOPMENT

Summit Group is currently drilling exploration wells to identify the best locations to construct production wells. Two or more production wells will likely be needed to supply the proposed 1,000 ERUs.

Lefty Spring (see Figure 2) has a minimum flow of about 100 gpm. Although Lefty Spring could be developed under exchange application E4715 (35-11995), most of the water for the 1,900 ERUs at Powder Mountain will be supplied by wells. Note however, that there is considerable geologic and hydrologic uncertainty associated with the complex subsurface conditions at Powder Mountain. Bedrock is highly deformed and is covered with soils and unconsolidated and semi-consolidated deposits over much of the area. Well yield is dependent on stratigraphic and structural conditions, which can only be known after wells are drilled and tested.

During May 2013 the Summit Group drilled their first exploration at proposed well location #8 shown on Figure 2. A 24-hour airlift test of this exploration well yielded 79 gpm. Field measurements of electrical conductivity indicate that the total dissolved solids (TDS) concentrations is acceptable; however, analytical results will not be available until mid-June 2013. The DDW has approved a production well at this location.

The Summit Group has started a second exploration well at the location shown on Figure 2. If yield and water quality are satisfactory, a production well will be permitted with DDW and DWRi and drilled at this location during the summer of 2013. The Summit Group plans to permit and drill additional exploration and production wells, as needed, to supply the planned expansion of Powder Mountain.

William D. Loughlin, P.G.
Manager, Principal Hydrogeologist

LICENSED PROFESSIONAL GEOLOGIST — WILLIAM D. LOUGHLIN — 5705503-2250 — STATE OF UTAH — 6-12-2013

Figure 1 – Location Map
Figure 2 – Vicinity Map

Cc: Mr. Russ Watts, P.E. Watts Enterprises, Inc.
Mr. Rick Everson, P.E. – Watts Enterprises, Inc.

POWDER MOUNTAIN WATER RIGHTS AND WATER DEVELOPMENT STATUS

Summit Mountain Holding Group (SMHG) currently owns 1,400 acre feet of Weber Basin water rights on the top of Powder Mountain in seven different state approved diversion points. The 1,400 acre feet of water rights is more than enough to supply water for the approved 2,800 units per the Development Agreement. (See attached Bill Loughlin's Engineering letter)

It is the obligation and right of SMHG to develop, in conjunction with the Powder Mountain Sewer and Water District and the State Division of Drinking Water, each well site to extract and store the designated water requirements for the development of each phase of the project as designated by the State of Utah.

POWDER MOUNTAIN WASTEWATER PLAN

SMHG, in conjunction with the Powder Mountain Sewer and Water District, and the Wolf Creek Sewer and Water District, are in the engineering and planning stages to combine their wastewater treatment facilities to provide service for the future growth of the Powder Mountain Development.

SMHG is presently in the middle of negotiations, engineering, planning, and strategy to combine parts of the main trunk lines to assure future growth and wastewater services for the Powder Mountain Development.

Exhibit A
Existing plan with changes noted

Benefit Analysis

NO CHANGES

Redevelopment Agency of Weber County
Proposed Community Development Project Area - Powder Mountain

FINANCIAL SUMMARY		20 Year Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Proposed Development			2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Land Sales Per Year			$43,560,000	$10,451,000	$11,142,000	$12,508,000	$13,877,000	$29,026,000	$40,841,000	$41,543,000	[illegible]	[illegible]	[illegible]	[illegible]	$0	$0	$0	$0	$0	$0	$0	$0
Land Sales			43,560,000	10,451,000	11,142,000	12,508,000	13,877,000	29,026,000	40,841,000	41,543,000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Assessed Value Per Year (discounted and rounded edp version)			34,400,000	72,200,000	160,100,000	216,800,000	328,600,000	364,800,000	451,100,000	497,900,000	554,600,000	640,800,000	679,100,000	711,500,000	747,600,000	831,000,000	840,000,000	840,000,000	840,000,000	843,000,000	845,000,000	848,000,000
Cummulative Investment Totals (SMHG & BR - discounted)			43,560,000	80,675,000	178,321,000	214,373,920	318,119,400	358,683,920	451,596,680	514,711,240	565,638,280	675,985,440	725,875,920	769,466,920	809,206,920	924,473,920	924,473,920	924,473,920	924,473,920	924,473,920	991,973,920	991,973,920
Proposed Resort/Residential Development (investment per year)		$991,973,920	43,560,000	$37,115,000	$97,646,000	$36,052,920	$103,745,480	$40,564,520	$92,912,760	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0	$0	$0	$0	[illegible]	$0
Real Estate			43,560,000	37,115,000	97,646,000	36,052,920	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buildings - Boutique Hotel, Retreat, and Co-Working Units			-	-	67,500,000		58,500,000		40,500,000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Condominiums (Units)			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Village/Zero Lot Line			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Village/Zero Lot Line Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cabin/Nest Units			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Retail/Live/Work Units			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Retail/Live/Work Units Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Home/Village Units			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Home/Village Units Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Estate Lots			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Estate Lots Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ranch Compound			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ranch Compound Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Personal Property		$47,918,000	$0	$0	$7,500,000	$492,000	$7,117,520	$680,480	$5,210,240	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Buildings - Boutique Hotel, Retreat, and Co-Working Units			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Condominiums (Units)			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Retail/Live/Work Units Build-Out			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Infrastructure:			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Private Infrastructure			[illegible]	[illegible]	[illegible]	$0	[illegible]	[illegible]	$0	$0	$0	$0	$0	$0	$0	$0	$0	[illegible]	[illegible]	$0	$0	$0
Electric Power			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Geothermal			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fiber Optics			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Natural Gas			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Public Infrastructure			$0	$0	$0	$0	[illegible]	$0	$0	$0	$0	[illegible]	$0	$0	$0	$0	$0	$0	[illegible]	$0	$0	$0
Roads & Bridges			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Culinary Water			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sanitary Sewer			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Development Enhancements			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Personal Property			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ski Lifts			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Electric Bus & Shuttle System (e.g. Utah State WAVE)			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Real Estate			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CUMMULATIVE			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Structural Parking			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Retreat Facilities			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Special Event Facilities			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Restaurants and Lodges			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Potential Secondary or By-Product Development			$0	$0	[illegible]	[illegible]	[illegible]	$0	[illegible]	$0	[illegible]	$0	$0	$0	$0	$0	[illegible]	$0	[illegible]	$0	$0	$0
[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Other Internal and External Projects			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ogden Valley Master Plan			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trail Network			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
School Impact Mitigation			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Resort/Residential Development (investment per year)	100%		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Development Enhancements	100%		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Potential Secondary or By-Product Development	100%		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Real Property Development			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Proposed Resort/Residential Development																						
Proposed Development Enhancements																						
Potential Secondary or By-Product Development																						
Total Real Property Development																						
Estimated Total Project Personal Property Depreciated Taxable Value			$0	$4,800,000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0	$0	$0
Estimated Total Project Personal Property Taxable Value	80%		$0	$4,800,000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$0	$0	$0

In 2013 the Summit Mountain Holding Group, in conjunction with Weber County, hired Bonneville Research to conduct an in-depth study of the costs and phasing of the Powder Mountain improvements and the potential tax benefit yield to the citizens of Weber County. (See attached Bonneville Research Benefit Analysis - Exhibit 4) This study was based on an initial assumption of 1,000 residential units and 290,000 SF of hotel, commercial, retail and restaurant square footage. These numbers are roughly equivalent though slightly lower than the proposed phase 1 development numbers and were used to provide a more conservative study in an effort to not overstate the potential project positive impacts. The total proposed development of 2,800 units (which includes hotel units) assumes a proportionate increased positive yield for Weber County but may vary pending actual product types, infrastructure requirements, etc. as the project develops. (See attached Economic Impact Memorandum from Bonneville Research, Exhibit 4.1)

Study Numbers
1,000 Residential Units
190,000 SF Commercial Hotels
@ 360 SF/room = 527 units
100,000 SF Retail/Restaurants

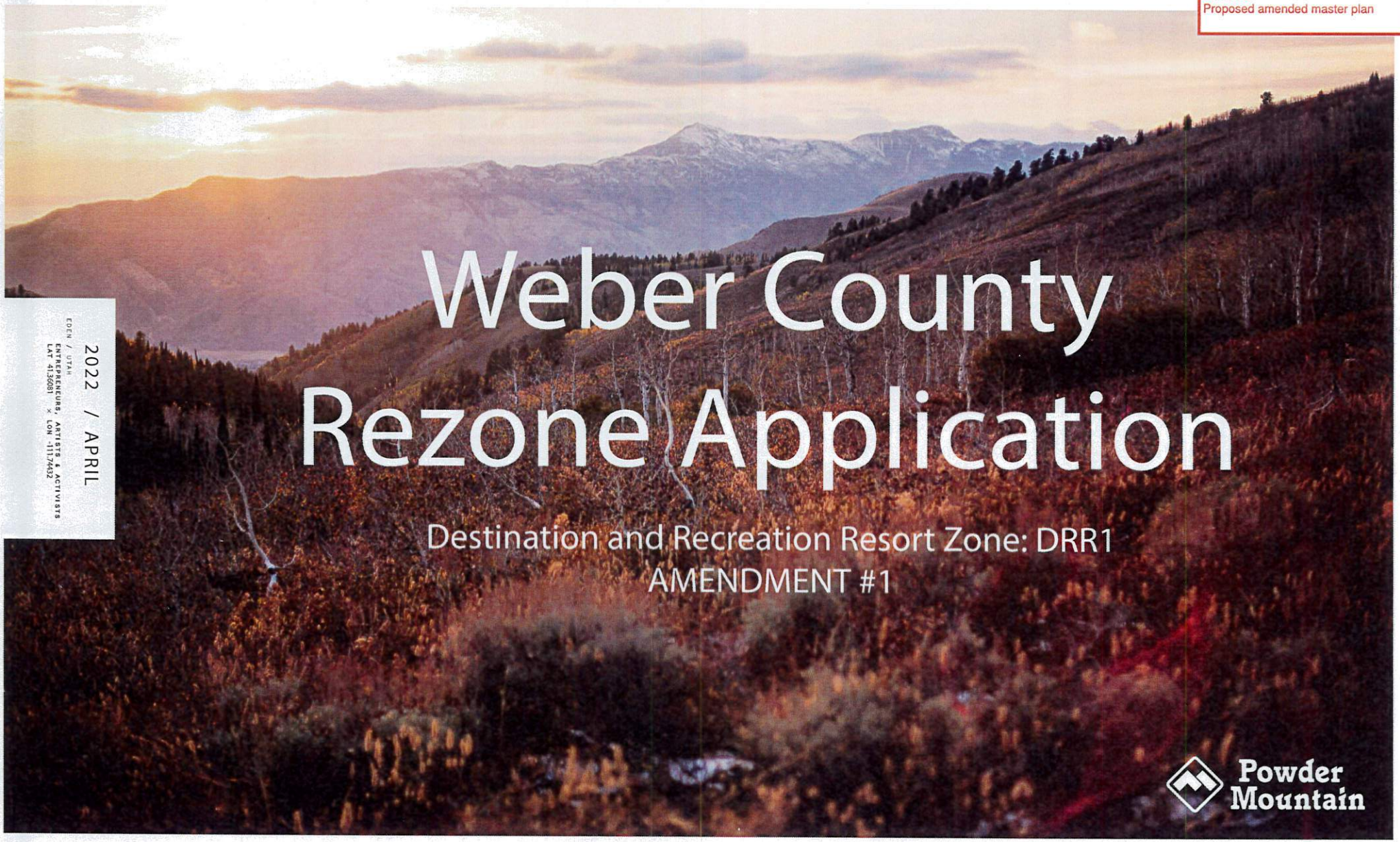
Proposed Phase 1 Numbers
1,204 Residential Units
818 Hotel Units
100,000 SF Retail/Restaurants

Study Highlights

- The projected 20 year cumulative resort investment totals an estimated 990 million dollars.
- The projected total infrastructure investment over 20 years is an estimated 105 million dollars.
- The projected annual tax revenue to Weber County at the 20 year level is estimated between 40-50 million dollars.

See next pages for Exhibit B of this staff report

Exhibit B
Proposed amended master plan



Weber County Rezone Application

Destination and Recreation Resort Zone: DRR1
AMENDMENT #1

Powder Mountain

2022 / APRIL

EDEN / UTAH

ENTREPRENEURS, ARTISTS, & ACTIVISTS

LAT 41.36081 × LON -111.7452

Exhibit B
Proposed amended master plan

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Exhibit B
Proposed amended master plan

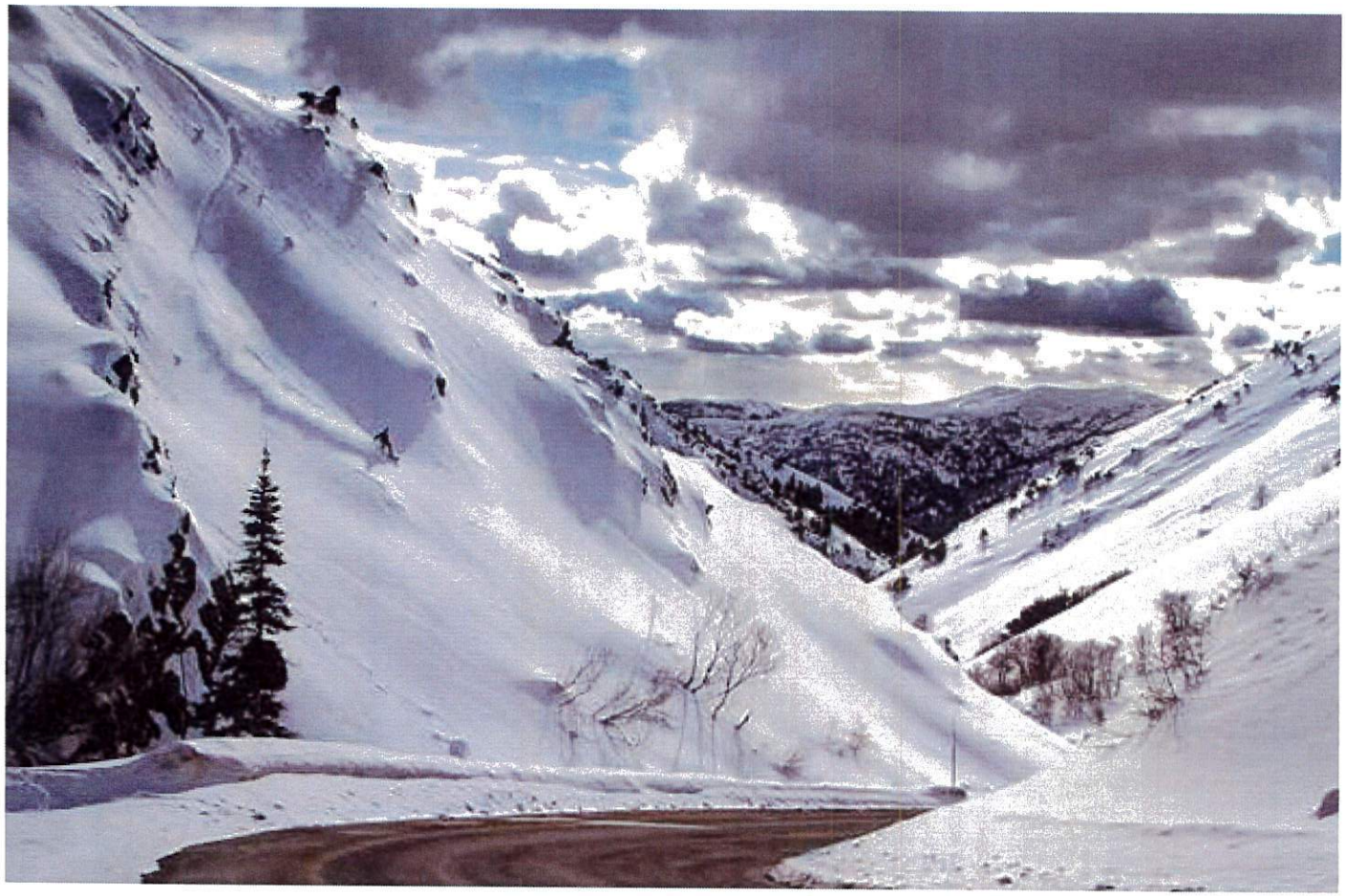

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Exhibit B
Proposed amended master plan

POWDER MOUNTAIN HISTORY

Powder Mountain Resort had humble beginnings as the winter range for Frederick James Cobabe's sheep herd. Frederick, who was orphaned at age 15, moved around from family to family until he went to work for Charley Scmaltz. He tended camp for Charley's herders taking his pay in sheep until he built a herd of his own.

Frederick established a summer range in the Grand Targhee area. A prohibition on grazing was enacted when the land was incorporated into the national forest system. Between 1902 and 1948, Fred accumulated land for a summer range around Eden, Utah. Old timers say that this property was severely overgrazed by previous owners and hardly a blade of grass could be found. Fred's soil conservation practices greatly improved the vegetation and Powder Mountain now is known as one of the best watersheds in the Wasatch Mountains.

Fred's son, Alvin F. Cobabe bought the livestock company with its 8,000 acres in 1948. Just a few months later, Fred was killed in an automobile accident.

When the ranch needed a reservoir, Alvin bought heavy earth moving equipment. He delved into the earth moving business to help pay for the machinery. A career in ranching, livestock and construction, however, just did not satisfy Alvin. In 1956, at 42, he sold the companies to enroll in pre-med classes at Weber College. Although the businesses were sold, he retained the property. He graduated from the University of Utah Medical School at age 45 and returned to the upper Ogden Valley to establish a medical practice. At that time, Dr. Alvin Cobabe was the oldest person to graduate from the school.

While horseback riding with friends along Lightning Ridge in the 1950's, someone casually mentioned that the terrain would make a great ski resort. The idea rang true with Dr. Cobabe and he began to amass adjacent property adding to the thousands acquired from his father. When the resort opened on February 19, 1972, he owned 14,000 acres.

Only the Sundown lift was open during Powder Mountain's first season. The area was lit for night skiing and a ski school was established. Food was prepared on an outdoor barbecue. The Main Lodge, the Sundown Lodge and the Timberline lift were added to operations for the 72/73 season.

Dr. Alvin Cobabe, at age 88, sold Powder Mountain in 2006 to Western American Holdings. The resort remained under the same management team, led by Aleta Cobabe, daughter of Alvin, during the 2006/07 season.

In 2010, Western American Holdings finalized the Powder Mountain development agreement establishing new zoning for the Weber County portion of the property and vesting the project with 2,800 units of density.

In 2011, education entrepreneur and venture capitalist Greg Mauro had a residence in the Ogden Valley for several years. Greg had attended "Summit at Sea," a conference which is part of the flagship event series operated by Summit Series. Summit Series was founded in 2008 by entrepreneurs Elliott Bisnow, Brett Leve, Jeff Rosenthal and Jeremy Schwartz. Greg approached the Summit team with an idea: what if Summit partnered with Greg and purchased the mountain to create a home for the organization and community? What if Powder Mountain became a place with the potential to be a positive force not just in the Ogden Valley but throughout the world? Within months, Summit had moved to Eden to pursue that dream and began the process of acquiring the Powder Mountain Resort with the vision of revitalizing Powder Mountain and establishing the Summit Powder Mountain Village, as the permanent home of Summit.

In mid 2013, the group closed on the nearly 10,000 acre resort property and immediately began to implement their plan for the mountain. This included construction of a world class lodge at the top of the Hidden Lake lift, resort improvements including revamped food and beverage services as well as obtaining approvals for the first phase of the development. The first phase of the development includes 154 units approved as part of a Planned Residential Unit Development (PRUD) including residential lots ranging from 1/2 acre to 20 acres as well as the initial phase of the Summit Powder Mountain Village. The Summit Powder Mountain Village will be the keystone for the Summit Community as the center for gathering, community events, shops and the epicenter of innovation within the resort. Phase 1 plat approvals were completed in early 2014 with the first home on the mountain anticipated to be completed in summer 2015.

The additional development areas outside of the Summit Powder Mountain Village will be focused on recreation and vacation activities and will enhance the Summit Powder Mountain Village by bringing additional visitors to the community. These areas will add to the vibrant community center of the Summit Powder Mountain Village.

TIMELINE

1971-72 Season
Powder Mountain opened February 19 with Sundown Lift.
Ski School began.

1972-73 Season
Main Lodge opened.
Sundown Lodge opened.
Timberline Lift opened.

1975-76 Season
Hidden Lake Lift added.
1981-82 Season
Shuttle service for employees and for Powder Country started.
1984-85 Season
Powder Mountain was the first Utah resort to allow snowboarding.

1986-87 Season
Hidden Lake Lodge opened.

1989-90 Season
Columbine Inn opened with two condominiums and five hotel rooms.

1990-91 Season
Diamond Peaks Heli-skiing started providing service between James Peak and at the Hidden Lake parking lot.

1994-95 Season
Sunrise Lift opened.

1999-2000 Season
Paradise Lift, a quad, opened up an additional 1300 acres of lift accessed terrain.
Cat skiing moved to Lightning Ridge accessing an additional 700 acres.
Powder Mountain became resort with the most ski able terrain in America.

2001-02 Season
Rails added at the Sundown Lift area.
Terrain Park added off Hidden Lake run.

2006-07
High-speed quad replaced the double chair lift at Hidden Lake.
The snowmobile tow at Lightning Ridge was replaced with snow cat with people mover.
Powder Mountain was sold to Western American Holdings.

2007-08
A snow kiting area was designated and Powder Mountain become one of the first, if not the first, resort in the US to offer a snow kite only pass.
The Snow cat Powder Safari began in January 2008.

2012
Summit relocates its operations to Eden, Utah from Malibu, California.
Summit Mountain Holding Group, L.L.C. ("SMHG") begins the acquisition process to acquire the approximate 10,000 acre resort.
Sky Lodge construction begins.
SMHG assumes Mountain operations for the 2012/2013 ski season.

2013
The Sky Lodge at Hidden Lake is completed.
Summit holds a Founders weekend on the Mountain to introduce the Summit community to the Phase 1 development.
Summit Outside is held over 3 days at the future Village site.
Summit Powder Mountain Village phase 1 PRUD of 154 units is approved.
SMHG closes on Powder Mountain's 10,000 acres.

2014
Phase 1 plats approved for 154 units.

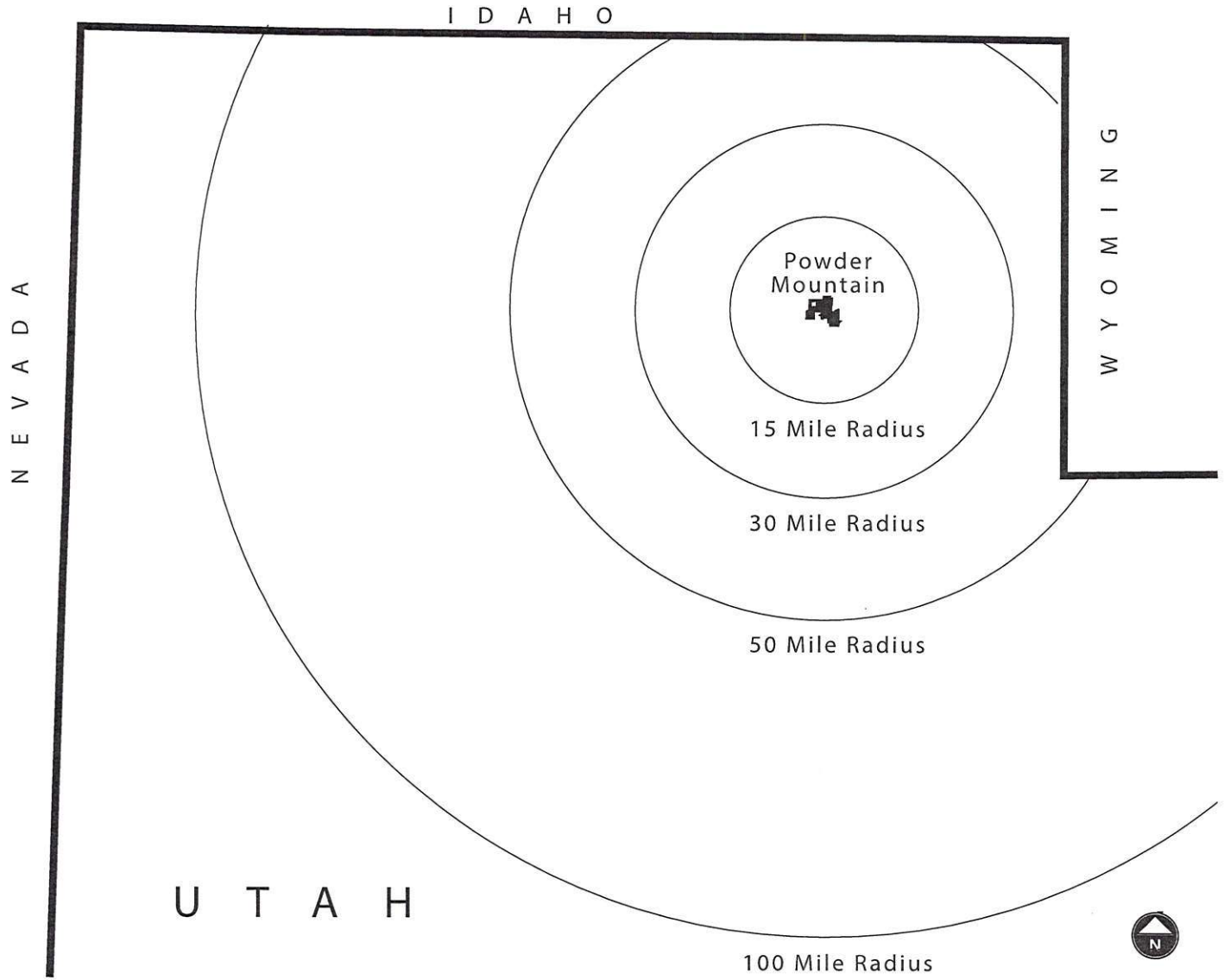
PURPOSE OF THE REZONE APPLICATION

To aid in the creation of Powder Mountain as the entrepreneurial center for its unique community and to maintain and advance Powder Mountain Resort as a destination four-season resort, the process of creating a Master Plan for the approximately 6,160 acres in the Powder Mountain area began in 2012. The Master Plan contained within this document that is a result of months of studies, programming, visioning and processing is as much about where development has not been placed as it is where development has been placed. The Master Plan provided herein establishes the foundation for Powder Mountain to create an authentic mountain destination with varied vibrant neighborhoods clustered throughout the 6,240 acres within Weber County with the Summit Powder Mountain Village as the center of this Summit community. Additional development areas surround the Summit Powder Mountain Village such as Mid-Mountain, The Ridge, Earl's Village, Gersten and the Meadow provide the community with varied neighborhoods and on mountain experiences with appropriately scaled developments and important open space preservation.

The Master Plan process began with substantial base mapping, site observations and design development studies to ensure the resort will be one of the most sensitively designed master planned projects in the West as well as one of the most unique and diverse. This process included comprehensive development of slope maps, existing vegetation mapping, geotechnical investigation, avalanche zones, wind and solar aspect studies, access feasibility, ski terrain and resort connectivity, wildlife corridors, existing trails, viewsheds (into and out of the property) and open space preservation, all of which are incorporated within this application.

The Applicant requests a zoning change for the approximately 6,160 acre Powder Mountain project area per the Ogden Valley Destination and Recreation Resort Ordinance (DRR1) passed and signed on August 18, 2009 (Ord. 2009-16). This ordinance was created to enable quality resort development in appropriate locations within Weber County. Rezoning the property to a Destination and Recreation Resort will allow Powder Mountain to realize the vision as one of the world's most unique mountain destinations combining an enhanced mountain experience with a truly cutting edge master planned community.

Exhibit B
Proposed amended master plan



Powder Mountain is located in Northeastern Utah just north and east of the City of Ogden. The resort property is located in both Cache and Weber Counties above the Ogden Valley and the communities of Eden, Huntsville and Liberty. The property is approximately 55 miles from Salt Lake City International Airport. It is accessed from the south by Highway 158 from the Ogden Valley.

Driving Distance from notable Locations to Powder Mountain:

Snowbasin Resort	22 Miles
Ogden	27 Miles
Layton	36 Miles
Salt Lake City	60 Miles
Park City	80 Miles
Provo	101 Miles
Boise	328 Miles
St. George	360 Miles
Cheyenne	441 Miles
Las Vegas	480 Miles
Denver	540 Miles
Reno	570 Miles

Exhibit B
Proposed amended master plan

PROCESS

This Destination and Recreation Resort Rezone (DRR-1) application contains all documents as required and requested by Weber County in order to obtain zoning and entitlements for the Powder Mountain Property identified herein. This application has been prepared in accordance with the Weber County Destination and Recreation Resort Ordinance (DRR-1) and thru close coordination with the Weber County Planning Department.

This application and subsequent approval will allow Powder Mountain to continue with the development plans outlined in this document and to build upon their Phase 1 approvals and development progress with more flexibility in design and density placement. The information within this document has been compiled in accordance with the application requirements outlined in the Ogden Valley Destination and Recreation Resort Ordinance.

Upon acceptance of the rezone application documents, the applicant is prepared to present the plan to the Ogden Valley Planning Commission (OVPC) as necessary to receive Commission and Public comments on the rezone application. Working with Planning staff, the applicant will fulfill all necessary requests for approvals. Following the OVPC findings, a public hearing(s) will be held with the County Commission to obtain full rezone approvals.

WHY PRESENT ZONING SHOULD BE CHANGED

Powder Mountain Resort has been a popular ski mountain destination in northern Utah and Weber County and is well known within Utah as a mountain with abundant terrain and great value for skier guests. This all despite missing key elements for a successful destination resort, such as high quality and diverse accommodations, retreats, top notch food and beverage, ski lifts, lodges, retail and other amenities. The current zoning on the property allows for adequate development of the mountain but is not fully appropriate to allow Powder Mountain to maximize its potential as a unique mountain destination. Rezoning the property to Destination and Recreation Resort will enable the land owner to create an extraordinary recreation and residential experience while preserving and promoting the goals and objectives identified within the Ogden Valley General Plan. The rezone will enable new and yet traditional resort development planning strategies to be implemented lifting Powder Mountain to the front of the mountain community, ski resort and retreats industry while still preserving abundant open spaces and contributing to the surrounding community's long term well being.

PUBLIC INTEREST

The Master Plan for Powder Mountain Resort will provide a diverse and unique mountain experience for both visitors and residents. The Master Plan provides for both residential communities and recreational properties within the project. The new commercial developments supporting the proposed residential, hotel(s), recreational uses and open spaces at Powder Mountain will provide additional tax revenues to Weber County. These new uses will give Powder Mountain a sustainable development base from which to grow and will benefit the community as a whole while continuing the recreational focus as identified by the County.

SUBSTANTIAL PUBLIC BENEFITS

The rezone will allow the development to move forward with development plans that will provide the following Substantial Public Benefits:

The process requires the development of a full Master Plan for the Rezone area. This will provide the public with the vision for the resort and will insure public input is provided as part of the rezone approval process that would otherwise not be available under the current zoning approval process and development applications.

Substantial agency review of the project is required as part of the DRR1 rezone application. This review is expansive and thorough and provides for a much broader scope of review than if the project was submitted in piecemeal fashion under current zoning. This includes reviews by:

- Weber County (Assessor, Economic Development, Engineering, Planning, School District, Sheriff, Treasurer)
- Utah Department of Transportation
- Utah Division of Wildlife Resources
- US Forest Service
- Weber Pathways
- Rocky Mountain Power
- Powder Mountain Sewer and Water

Substantial Open Space will be guaranteed with the location of the open space identified within the Master Plan and with a minimum of 30% of the adjusted gross acreage being provided as conservation open space.

The rezone adds approximately 1,940 acres of land to the previous development application approval and proposes to strip all development rights from this additional property while preserving the area as open space. Much of this property includes the Regional trail to Wolf Canyon Trailhead.

All proposed recreational amenities will be publicly accessible integrating the new community with those existing and future communities within Weber County. This includes the implementation of important public trail links to and thru the resort as identified on the Open Space and Trails Plan.

The rezone allows the development to further cluster development areas preserving more open spaces thru the flexibility of the rezone and its allowed uses, building heights and overall design flexibility.

Establishes Design Guidelines and Sustainability practices within the rezone application far superior to current zone development requirements minimizing the overall impact of the community as a whole.

Establishes traffic mitigation practices with the rezone application reducing the overall traffic impacts to the existing transportation system and existing community that far exceed current zone requirements. These proposed mitigation practices include:

- Providing preferred parking in the day skier lots for vehicles with three or more occupants. To promote reduced vehicle emissions and a healthier environment, preferred parking could also be extended to hybrid vehicles and other low-emissions vehicles.
- Implement the use of alternative fuel shuttles for the employee/ skier transit services.
- Provide transit passes to all employees not housed on-site and require the employees to use them to access the resort.

CHANGES TO THE GENERAL AREA SINCE THE ADOPTION OF THE GENERAL PLAN

The Powder Mountain Resort area is recognized as a recreation/ resort area that has potential for further development that would support and enhance the existing recreational components within the resort providing a viable long term project. The Destination and Recreation Resort Ordinance was written to allow resort development in appropriate locations. Since the adoption of the General Plan, the Powder Mountain Resort and adjoining undeveloped acreage within Weber County was purchased by Summit Mountain Holding Group. This group aims to create a unique destination community with a vision for a diverse mountain village and associated mountain neighborhoods that would provide economic stability for the existing resort while also providing substantial expansion and diversity of this amenity. This change in ownership since the adoption of the General Plan marks a substantial shift in project vision with enhanced traffic mitigation and sustainability requirements as outlined within this document. The County General Plan supports and promotes appropriate resort facilities as a major element within the County. Powder Mountain is an ideal location for responsible, well balanced and sustainable resort development.

PROMOTE HEALTH, SAFETY AND WELFARE TO WEBER COUNTY

The Master Plan as proposed within this rezone document for Powder Mountain promotes the health, safety and welfare of Weber County residents by creating a diverse year-round resort. This diversity will provide stability and long term benefits to Weber County and in particular the Ogden Valley while also preserving significant open space within the project.

The project will provide long term economic benefits as outlined in the Benefits Analysis ensuring the County and its residents are not negatively impacted fiscally.

The Master Plan includes important trail connections between neighborhoods and within the surrounding communities of Eden and Liberty through the regional trail links that have been extended into and thru the Resort property. These trail connections link the Resort to the Valley floor providing access to important recreational amenities while limiting impacts to existing communities and residential neighborhoods continuing the important community access to the vast outdoors in Weber County.

Traffic mitigation plans will be implemented to ensure that all new development impacts to existing and future roadways are minimized providing safe a appropriate access to the mountain while mitigating those impacts to existing and future neighborhoods in the Valley.

The development areas within the project were designed with respect to the land attributes preserving sensitive lands and stream corridors and to avoid sky lining. The importance of economic, environmental, community and aesthetic benefits were taken into consideration to ensure a quality destination that provides benefits to the owners, Weber County and the community.

Exhibit B
Proposed amended master plan

As outlined in Chapter 35 of the Weber County code (35-3), the project meets the approval criteria as follows:

A. The proposed Resort can be developed in a manner that will not substantially degrade natural/ecological resources or sensitive lands as identified in Chapter 43, Ogden Valley Lands Overlay District, or the Weber County Zoning Ordinance.

• The Sensitive Lands Areas as outlined in Chapter 43 of the Weber County Code are provided on pages 13-15 with the Powder Mountain project boundary indicated. The Wildlife Habitat exhibit shows that the Powder Mountain project area is generally outside the important wildlife habitat area with the only interface occurring within the Southwest portion of the property and involving the existing highway access to the Resort. No development is proposed within this important wildlife habitat area.

While there are stream corridors within the project area, the primary area of potential impact includes the Powder Mountain Road and Wolf Creek interface. The Road exists and all impacts have previously been mitigated as this roadway serves as the existing access to the Resort. No other stream corridors exist within close proximity to any proposed development area within the rezone Master Plan.

Due to Powder Mountain's proximity above the valley floor, no scenic roadway impacts exist as defined within these exhibits.

B. A professional study has provided substantial evidence determining that the proposed Powder Mountain Resort is viable and contributes to the surrounding community's economic well being. A fiscal impact and cost benefit analysis is attached as Exhibit A. This study was conducted by Bonneville Research out of Salt Lake City, Utah. Highlights of the market, economic and fiscal impact are as follows:

MARKET FEASIBILITY

Utah's mountain resorts are provided with unique market advantages due to their close proximity to the Salt Lake International Airport, large and well maintained local highway and road infrastructure, a large local skier and recreational base in close proximity to resorts and typically abundant snowfall that is considered some of the best in the world.

The State of Utah is also progressive in its ski and outdoor recreational marketing promoting Utah as a recreational destination and prioritizing it as one of the major cornerstones of long term revenue generators for the state.

With the region established as a well developed destination for both summer and winter visitors, the Ogden Valley and Powder Mountain are poised to maintain a consistent rate of growth within these recreational and residential markets. With the proximity to the Salt Lake International Airport and the continued exposure to the area that is spearheaded by Park City and Deer Valley communities among others, the opportunity to capture first and second home buyers from regions throughout the west remains strong. The Summit community and their unique gathering of entrepreneurial guests will also bring together this love for the outdoors with the new and local communities creating a unique mountain destination.

The Powder Mountain Resort will continue to become more and more recognized by a greater audience as already seen with the implementation of the Phase 1 infrastructure and momentum will only continue to grow as the project develops on the mountain.

ECONOMIC IMPACT

Total economic impacts of the Powder Mountain project are anticipated to continually increase as the project builds out with the addition of hotels, corporate and educational retreats, expanded and new recreational amenities and the synergy of the Summit Powder Mountain Village grows. After full build out, ongoing economic impacts are projected to provide continued positive effects as follows:

Direct annual output is projected as $60 million, and total annual output (including direct output plus secondary or "multiplier" impacts) is projected at $112 million.

Direct jobs created by the development are projected at 1,623 at full build out.

Direct labor income is projected at $24 million annually.

FISCAL IMPACT

The proposed Powder Mountain project is identified to provide a substantially positive fiscal impact for Weber County.

After project build out, Powder Mountain is projected to generate approximately $55 million in annual taxable revenue. The Powder Mountain project is anticipated to be one of the highest valued resort projects in the west with these values creating the very positive budgetary impact. Most residential units will be second homeowner classification while the assessment of most residential units will be at full market value. This will result in high per capita spending and resulting sales tax revenues and a moderate cost of service profile which is consistent with similar projects throughout western resorts.

Other growth-sensitive Weber County funds are projected to experience positive fund balances throughout the construction period of the project and after build out providing a broad fiscal benefit to the County. (See attached Bonneville Research Study)

C. A professional traffic study has explored and provided substantial evidence determining that proposed traffic mitigation plans will prevent transportation corridors, serving the Project, from diminishing below an acceptable Level of Service.

The Transportation Element study prepared by PEC out of Salt Lake City is attached as Exhibit 2.

Overall the road network can and will provide appropriate access to and from Powder Mountain, with some improvements required for mitigation as the project is built out.

D. The natural and developed recreational amenities, provided by the Resort, shall constitute a primary attraction and provide an exceptional recreational experience by enhancing quality public recreational opportunities.

Powder Mountain Resort is currently a well established ski resort. The proposed Master Plan is designed to enhance the visitor experience with expanded recreational services, new and diverse overnight accommodations, varied retail shops and services including restaurants, a mountain village main street, and varied destination attractions. Publicly accessible recreation facilities and activities are planned throughout the project area to establish Powder Mountain as a year-round destination. These activities include walking/hiking trails, biking trails including mountain biking and cyclocross trails, horseback riding, naturalists tours, camping, rental of non-occupied units and other outdoor special events.

E. The proposed Seasonal Workforce Housing Plan will provide a socially, economically and environmentally responsible development.

The seasonal workforce housing plan is provided on page 43. At full project build-out, it is estimated that Powder Mountain Resort will generate 1,623 full-time equivalent employees and 984 workforce housing units.

As calculated in the table on Page 43, Powder Mountain Resort will provide at least 98 seasonal workforce housing units.

F. Public safety services are and/or will be feasible and available to serve the Resort in a manner that is acceptable to the County Commission.

Throughout the development of the Phase 1 plans as well as the DRR1 Master Plan development, The development team has continually met with representatives from the Sheriff's office, Fire Department and Emergency Medical Service providers gathering input to the plans and incorporating that input into this application. The proposed Master Plan reflects the input received from these departments with regard to necessary Emergency Services. Per the discussions with these public safety providers, Powder Mountain will provide a facility to house both the Sheriff and Fire Department services on mountain. A preliminary parcel has been identified within Summit Powder Mountain Village and will be provided at the time the services are deemed necessary by the emergency service providers. This parcel will be integrated within the Resort in a manner that fits the development setting in which it is located but the scope of services provided will be modeled after the Huntsville Station as per the discussions with the emergency providers. Feasibility letters from both the Fire Department and Sheriff's Department are attached on Page 47.

Compliance with the

Exhibit B
Proposed amended master plan

The proposed Master Plan for Powder Mountain presented in this application is in compliance with the Ogden Valley General Plan Goals and Objectives as outlined in the Ogden Valley General Plan as follows:

3.01 VISION: PROTECT THE NATURAL BEAUTY AND NATURAL RESOURCES OF THE VALLEY

Goal: Protect Air Quality and Water Resources

Powder Mountain maintains a strong commitment to Weber County's goal of preserving the natural beauty and natural resources of the Ogden Valley. The Master Plan was developed with the ethos that all development must be light on the land and all development impacts should be minimized or mitigated to the greatest extent possible providing a balance between the built and natural environments. Measures to protect the natural resources and beauty of the Ogden Valley during and after both the planning and construction stages include:

Clustering all development within areas that allow for minimized development impacts thus maximizing significant and important open spaces.

Much of the development is centered around "village" infrastructure allowing for walkable trips or reduced traffic impacts and limiting the size of the project "footprint" on the mountain.

A comprehensive transportation plan will be implemented providing resort shuttles from the Valley via Park and Ride lots, shuttles within the resort property and the provisions of essential on-mountain services reducing off-mountain trips all of which will help protect the Valley's air quality thru the reduced trip counts.

Water quality controls will be implemented on the following levels.

Water

As awareness of the importance of conservation of resources and implementation of sustainable practices grows, Powder Mountain has a goal to introduce a higher level of implementation than almost any project yet envisioned in Utah. Powder Mountain is using an integrated water management strategy in an effort to develop a truly sustainable project.

Groundwater

Powder Mountain understands the value of groundwater as an essential resource. To minimize impacts to groundwater resources, Powder Mountain is adopting water conservation and efficiency requirements for both indoor and outdoor water use that will make the project a leader in the State of Utah.

Surface Water

Powder Mountain will also focus on the protection of surface water by limiting grading and preparing erosion control plans and Stormwater Pollution Prevention Plans (SWPPPs) that will incorporate the appropriate best management practices to protect drainages, wetlands and surface waters.

Water Conservation

Powder Mountain's Design Guidelines, attached as exhibit 3 within this application, have been written to ensure that water is conserved both indoors and outdoors. The Guidelines require the use of low flow appliances and fixtures that are expected to reduce per person indoor water use to less than half of the State of Utah's design code requirement. In addition, Powder Mountain is restricting the total landscape area of each unit that can be irrigated as well as requiring weather based irrigation controllers, native and low water use plant types and limiting grading areas to protect natural areas.

Goal: Protect Open Space and Sensitive Lands

The most substantial and important portion of the Master Plan is what is not being developed. The Master Plan was sensitive to not only identified steep slopes, wetlands, stream corridors and drainages but it also factored in visually sensitive lands, important wildlife corridors, recreational open spaces and open space buffers. Additionally and as part of this application requirement, Weber County's sensitive land maps were overlaid on the Master Plan to ensure that all proposed development does not occur on areas identified as important wildlife habitats or within stream corridors and scenic road buffers. See Pages 13-15.

Goal: Preserve Wildlife and Wildlife Habitat

As shown on the Sensitive Lands Exhibit on Page 13, the proposed development boundary does overlap upon important wildlife habitat areas as designated by Weber County. However, the detailed Master Plan does not propose any development within this important wildlife area and in fact creates a substantial buffer to this area. However, it is recognized that wildlife can be found throughout the property and providing well placed wildlife corridors will allow all proposed development to work in harmony with the natural environment. The master plan for Powder Mountain proposes clustered development parcels on only 18 percent of the gross acres located in Weber County. The remaining 82 percent is available for wildlife habitat and open space.

3.02 VISION: MAINTAIN THE VALLEY'S RURAL ATMOSPHERE AND RURAL LIFESTYLE

Goal: Promote a Sense of Pride in the Valley's History and Heritage

There are no identified cultural and/or historical resources within the Powder Mountain project area. The applicant is committed to preserving the existing ski area at Powder Mountain as a community resource. Powder Mountain is committed to maintaining the wide open and rustic nature of the resort while providing tasteful upgrades and updates to the facilities. We are dedicated to appropriately addressing the elements that make the resort special and enhancing those elements.

Goal: Require that Development be Compatible with the Valley's Rural Character and Natural Setting:

In order to ensure that development is compatible with the Valley's rural character and natural setting, a set of Design Guidelines has been established that will govern the style and characteristics of buildings, landscaping, signage, etc. This style pulls from the Valley's architectural vernacular, utilizes timeless forms and materials and requires structures to be placed sensitively to become part of the landscape, not dominate the landscape.

Goal: Require that Development and Community Services Conform with the Valley's Natural Resource Capabilities

Throughout the development process the Applicant will plan and provide for adequate infrastructure to support all proposed development. This will include calculated phasing of units, concurrency measures for water and sewer as well as establish required funding mechanisms for required development improvements.

Goal: Provide Adequate Emergency and Medical Services

Substantial coordination with the County Emergency Services Departments has been implemented in the Master Plan. The Emergency Services Plan on page 47 of this application outlines the discussions with the Sheriff and Fire Marshall as well as letters of feasibility from each. Emergency and medical services will be phased appropriately and adequately as development occurs and as required by these Emergency Service Providers.

Goal: Promote Agricultural Land

Due to the proximity of the project property at elevations well above the valley floor as well as the steep slopes and recreational focus of the existing mountain property, the project does not currently contain an abundance of agricultural uses and therefore is not conducive to provide agricultural uses in the proposed plan for the project.

Goal: Recognize and Respect Private Property Rights

The proposed Master Plan is fully located on private property owned by the applicant and does not negatively impact any adjacent private land.

Goal: Facilitate the Smooth Flow of Traffic In and Out of the Valley

A comprehensive transportation study has been prepared by Project Engineering Consultants (PEC) and is included with this application as Exhibit 2. The report studies the transportation impacts anticipated to be associated with the proposed Master Plan, provides an analysis of phased development steps to identify what and when any necessary roadway improvements would be needed, and identifies any traffic mitigation measures to be utilized by the project to ensure the existing and future road systems continue to provide adequate operations throughout the valley as the development progresses ti build out.

Goal: Enhance Quality Recreational Opportunities

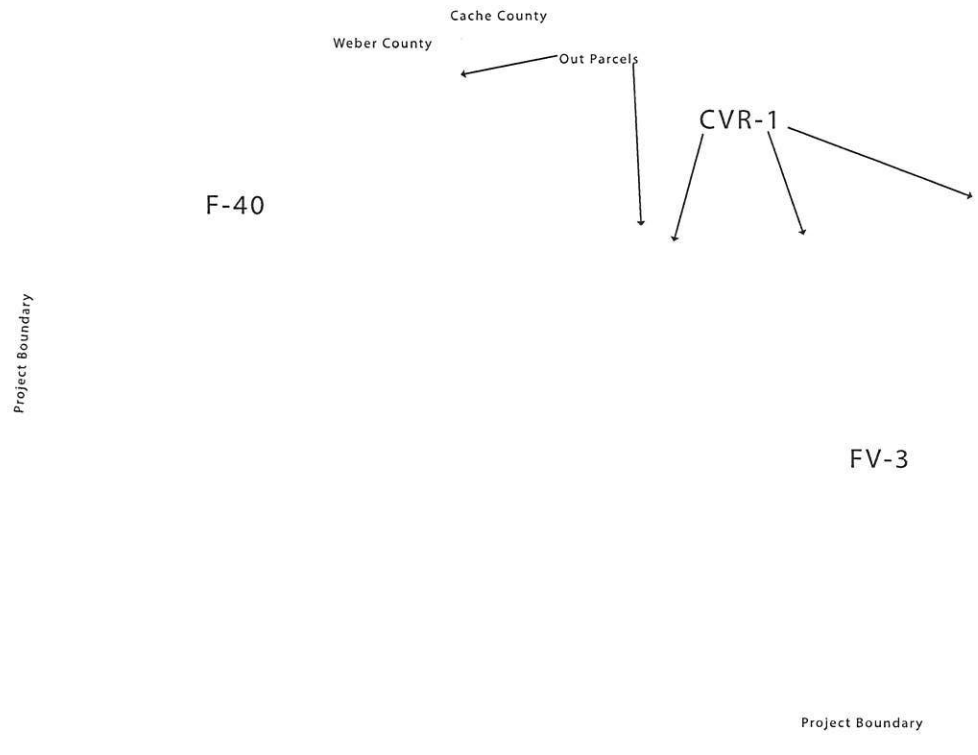
The Recreation Plan and the Open Space and Trails Plan outline the recreation opportunities that are proposed for Powder Mountain. These plans highlight the additional recreational amenities that may be provided in addition to those that currently existing within the project and as part of the existing ski area. The trails plan highlights trail linkages to the Ogden Valley via Gertsen Canyon and the existing Gertsen Canyon trail and also provides for regional trial connections both east and west thru the project while also providing a substantial and diverse trail network internal to the resort.

In addition to skiing, snowboarding, snowshoeing, etc., which are already enjoyed at Powder Mountain, the recreation facilities plan expands the recreation opportunities to include non-skiing activities, such as hiking, mountain biking, glamping, ice skating, fishing, as well as facilities for special events and equestrian experiences.

Exhibit B
Proposed amended master plan

Exi

The Powder Mountain property located in Weber County is currently zoned Commercial Valley Resort Recreation Zone (CVR-1), Forest Valley (FV-3) and Forest Zone (F-40).



CVR-1 - Commercial Valley Resort Recreation Zone
The purpose of this zone is to provide locations in the Ogden Valley and at major recreation resort areas, where service facilities and goods normally required by the public in the pursuit of general recreation activities can be obtained.

FV-3 - Forest Valley Zone
The purpose of the Forest Valley Zone is to provide area for residential development in a forest setting at a low density, as well as to protect as much as possible the naturalistic environment of the development.

Forest Zone - F-40
The intent of the Forest Zones is to protect and preserve the natural environment of those areas of the County that are characterized by mountainous, forest or naturalistic land, and to permit development compatible to the preservation of these areas.

Exhibit B
Proposed amended master plan

Geol

The Geologic Hazards map identifies surficial geologic conditions at the Project and identifies potential risk from geologic hazards. This investigation is intended to:

(1) provide preliminary geologic information and assessment of geologic conditions;
(2) identify potential geologic hazards that may be present and qualitatively assess their risks to the intended project; and
(3) provide recommendations for additional site- and hazard-specific studies or mitigation measures as may be needed based on our findings.

Given the large Project size and scale of the mapping included with this investigation, small variations in surficial conditions and geologic hazards risk may occur and should be expected.

This report is intended to be a reconnaissance-level tool to assist with Project planning, and reduce and minimize impacts from high-risk geologic hazards.

The known geologic conditions are explained in greater detail in the preliminary Geologic Hazard Evaluation report that is included as Exhibit 1 of this submission.

Exhibit B
Proposed amended master plan

Existing Topog

The Slope Analysis illustrates that much of the Powder Mountain property contains slopes most suitable to ski terrain. The projects topography does vary greatly from flat meadows and ridges to steep ski terrain and mountain slopes. The Master Plan was developed with sensitivity to placing development on steep slopes with the majority of the project density clustered around the more gentle meadows and saddles that exist throughout the development.

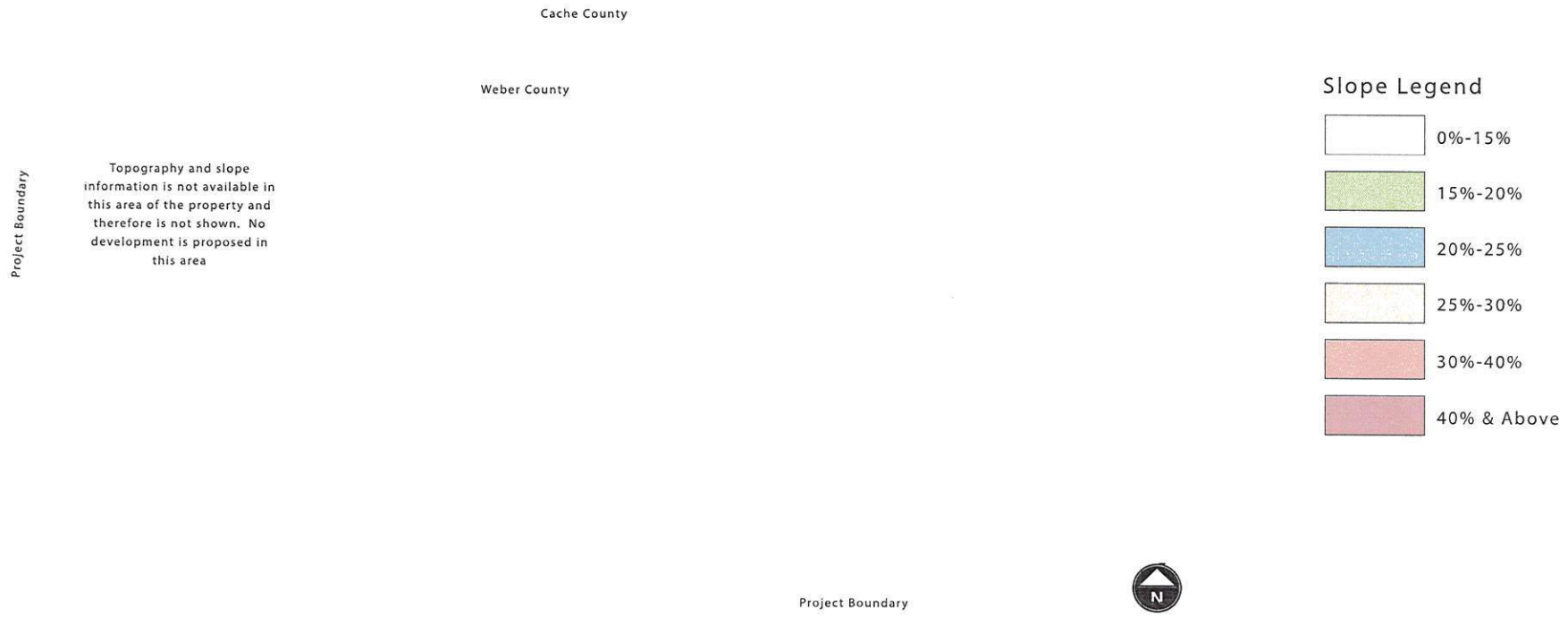
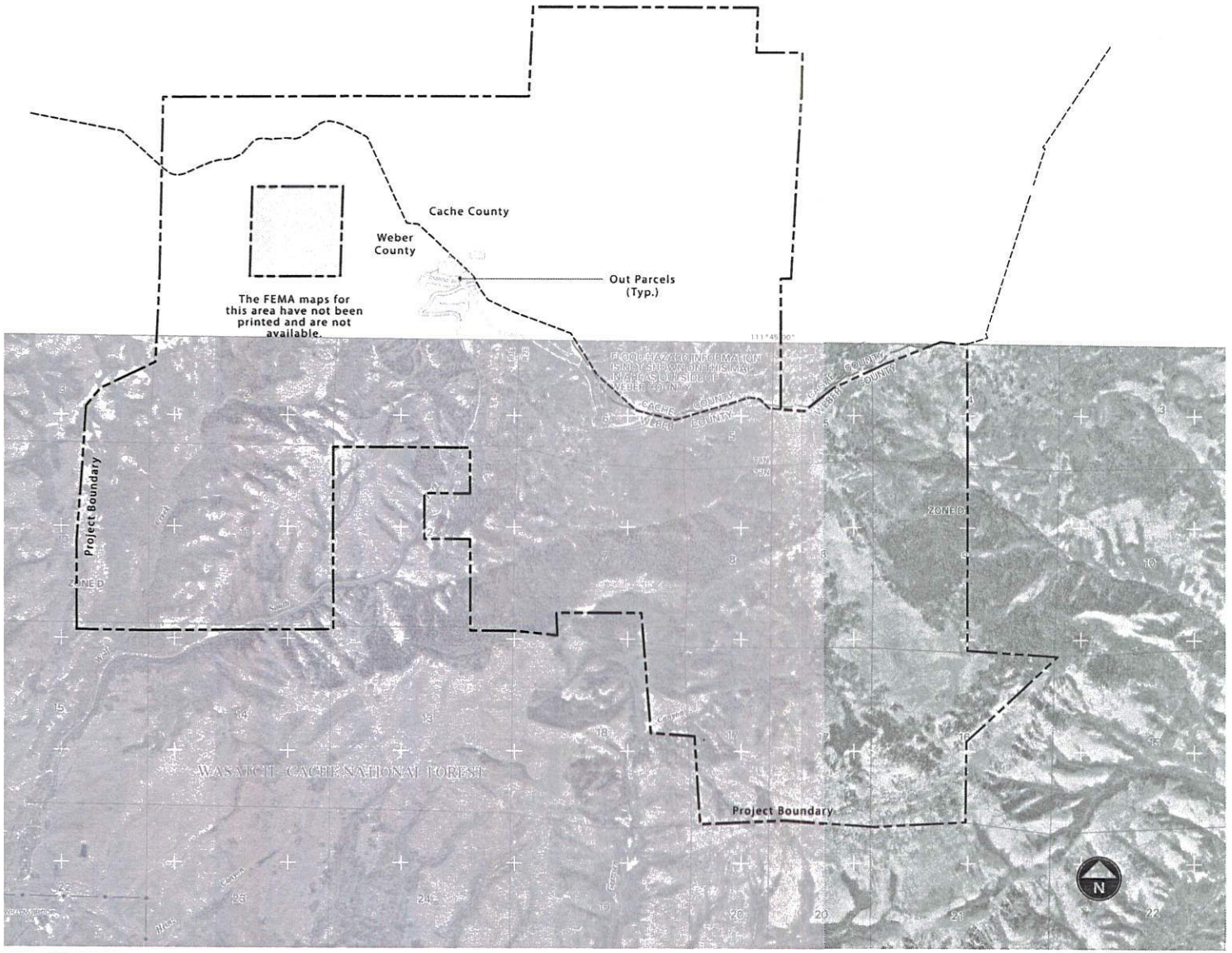
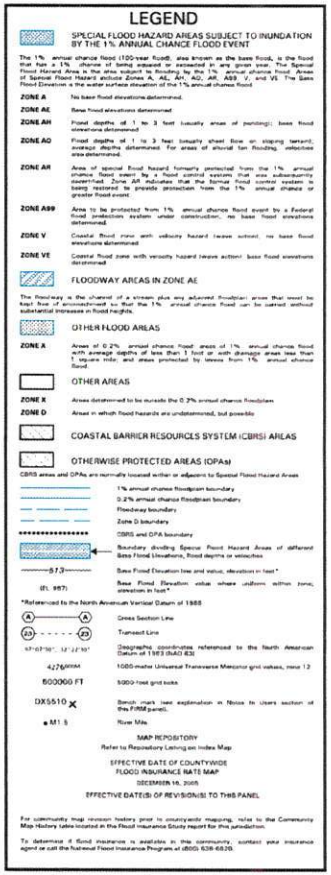


Exhibit B
Proposed amended master plan

Flo



The FEMA Flood Insurance Rate Maps for Weber County illustrate that all areas mapped within the Powder Mountain project boundaries are identified as Zone D. As defined, Zone D area flood hazards are undetermined. The Powder Mountain property is generally located at an elevation above flood hazards due to its proximity to the top of the drainages within the area.


LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A — No base flood elevations determined.

ZONE AE — Base flood elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR — Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.

ZONE A99 — Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.

ZONE V — Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE — Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.

513 — Base Flood Elevation line and value; elevation in feet*

(EL. 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross Section Line

Transect Line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

4276000 FT — 1000-meter Universal Transverse Mercator grid values, zone 12

6000000 FT — 5000-foot grid ticks

DX5510 X — Bench mark (see explanation in Notes to Users section of this FIRM panel).

M1.5 — River Mile

MAP REPOSITORY
Refer to Repository Listing on Index Map

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
DECEMBER 16, 2005

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

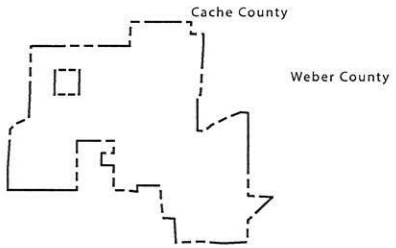
Sensitive Land Areas: Wil

Exhibit B
Proposed amended master plan

The Powder Mountain property does slightly overlap with the Important Wildlife Habitat Zone as indicated here but both areas are located at the periphery of the project area. No development plans are proposed within or near these areas. Although the proposed development areas are outside of the Important Wildlife Habitat Zones, it is recognized that smaller yet still significant wildlife habitats exist within the project boundary. Future development has been located to account for significant open spaces and buffers to facilitate wildlife habitat and wildlife corridors throughout the project and continued coordination with Weber County and the Utah Division of Wildlife Resources will be a priority to maintain these habitats throughout the project.

Sensitive Land Areas: Strea

Exhibit B
Proposed amended master plan



The Powder Mountain property is affected by the Ogden Valley Sensitive Lands Overlay District for streams corridors, wetlands and shorelines. The Master Plan has conformed to the development standards outlined in Chapter 43-2. The primary impacts are associated with the Wolf Creek and South Fork drainages in the Southwest portion of the property. These drainages have already been impacted and mitigation measures introduced as part of the existing roadway access to the Powder Mountain resort and any further impacts due to future roadway modifications will conform to the Weber County development standards.

In coordination with the Utah Division of Wildlife Resources (UDWR) all existing riparian corridors within proximity to proposed development areas within the project will be identified and protections put in place at the time of individual project approvals to insure these areas are preserved.

An approved jurisdictional wetland delineation report and concurrence report from the United States Army Corps of Engineers shall be required with the submittal for each phase of development if it is determined that jurisdictional wetlands may exist within any proposed development areas on the property.

Sensitive Land Areas: Scenic Roads 2.5

Exhibit B
Proposed amended master plan

Due to its physical location and relationship to the Ogden Valley and its Scenic Roadways, the Powder Mountain property is not affected by the Ogden Valley Sensitive Lands Overlay District for Scenic Corridors, Ridgelines and Historical/Cultural Resources.

PLANNING AND DESIGN PRINCIPLES

The Powder Mountain Resort totals approximately 10,000 acres with property that spans both Weber County and Cache County. Approximately 6,160 acres are located within Weber County with the vast majority of this area undeveloped. The existing Powder Mountain Resort Ski Area terrain is primarily within Cache County with only a small area currently located within Weber County. Approximately 4,300 acres of the Weber County portion of the project is vested by an approved Development Agreement dated November 29, 2012, Entry # 2607988 that established density for the property totaling 2,800 units. This application for the DRR1 rezone will add an additional 1,860 acres to the rezone property for a total of 6,160 acres to be processed for rezone. This additional acreage will be committed to project open space with the additional potential density stripped as part of this rezone application.

In 2012, Powder Mountain began to assemble a team of design and development professionals to initiate the Master Plan development that would appropriately integrate the vision for Powder Mountain. This planning process involved dozens of varied and skilled professionals and focused on every aspect of mountain design from roadway and ski design to snow storage and snow removal strategies. This planning process was thorough and extensive.

Due to the size of the property proposed for rezone to DRR1, the proposed development has been organized and broken into separate, smaller planning areas denoted on the Overall Master Plan and Overall Land Use Plan with a letter (Areas A through F). Each planning area is then detailed within this application to further illustrate anticipated master plans for each area identifying anticipated densities, uses, amenities and massing.

The concept plans within this submittal identify those areas most suitable for development and those mountain areas that will remain open space. This distinction has been identiifed as the most important element of the Master Plan. The areas NOT shown for development are as important or more important than those areas that are suitable for development. The development areas throughout the property are shown in two land uses that follow Weber County's DRR1 Zone Land Uses (Section 104-29-8). The most intense use (Mixed Use) allows for all permitted and conditional Land Uses as identified by the DRR1 Zone while the Residential use only allows those uses identified as permitted or conditional residential uses within the zone per the Land Use Code.

The proposed plan for the property within Weber County emphasizes the development of mountain "villages" that are appropriately located and provide suitable land uses, vehicular and pedestrian access, amenities and open spaces based on their locations and proposed functions within the resort.

The first of these mountain villages includes uses to enliven the existing mountain base at Mid Mountain and Sundown (Area A - Mid Mountain) by including hotels and condominiums for overnight accommodations at the existing base of the mountain. This area becomes the primary destination for year round visitors providing direct mountain access. This area also includes potential Hotel uses at the top of the Sundown lift as well as a mix of single family and multi-family homes located along the Sliver above Summit Pass Road and adjacent to the existing single family and multi family homes at Mid Mountain to give the Mid-Mountain area a true ski village mass and energy throughout the year.

The Ridge (Area B) builds upon the existing Hidden Lake Express top terminal which will become the core of this planning area. The Ridge development area will include Ski Lodges, Conference and Meeting spaces, hotels, townhomes and various residential properties ranging from small "nests" to 20+ acre ranches.

Earl's Village (Area C) continues the Powder Mountain tradition of starting your day at the top of the mountain and skiing down. Earl's Village provides a mix of hotel and multi-family development parcels with ski access in three directions and properties with views that are unmatched in the West. Earl's Village sits above the more boutique Summit Powder Mountain Village providing the classic ski mountain village anchor to the Resort.

The heart of the Powder Mountain project is the Summit Powder Mountain Village (Area D). The Summit Powder Mountain Village is the center of the Summit Community and is located on a saddle providing commanding views while simultaneously being tucked away from the rest of the mountain. This location preserves views and provides for a secluded and protected environment. This village provides for ski access into Mary's Bowl, Lefty's and Gertsen Canyon providing immediate access to the world class skiing at Powder Mountain. The Summit Powder Mountain Village contains a mix of hotels, boutique hotels and boutique shops, community amenities, public places and spaces, multifamily and single family home sites including townhomes, condominiums, attached and detached single family and "nests" of all types. This mix of uses surrounds the Summit Powder Mountain Village Main Street and forms the core of the Summit Powder Mountain Village. It also includes clustered residential development tucked amongst the existing trees and just beyond the village core. These areas include single family residential products that begin the density transition to the open spaces with larger lot types including ranch lots.

The Gertsen development area (Area E) transitions from the more dense Earl's and Summit Powder Mountain Villages to less intense yet still clustered multi family and single family units as the project moves toward the project boundary. A small, well organized node of multi family townhomes, "nests" and smaller lot single family units anchor the top terminals of the proposed Vern's and Gertsen lifts with lots getting progressively larger as you move west and down the hill. Here larger estate and ranch lots are tucked into large expanses of aspens and along the edge of the Enchanted Forest.

The Meadow Master Plan (Area F) transitions density from the most dense area of the Summit Powder Mountain Village to the project's south edge. The north edge of the Meadow development area maintains the structured road and lotting systems found in the Summit Powder Mountain Village but begins to loosen this development pattern thru the meadow and out to the rock outcropping with larger estate and ranch lots. The south edge of the development area is a location identified for a small, exclusive boutique hotel and retreat providing a destination anchor to the resort with views overlooking the Ogden Valley and Mount Ogden.

Throughout the planning process, open spaces and trail corridors and connections took center stage as seen on the Open Space and Trail Plan. This ensured that access to the beautiful and abundant natural features within the project remains accessible and preserves as much of this natural environment as possible.

The proposed Powder Mountain project is compatible with surrounding land uses and, as outlined herein, is in compliance with the goals and objectives identified in the Ogden Valley General Plan. The impact to the surrounding area will be positive as outlined in the Benefit Analysis. The impact on traffic congestion through the Valley will be minimal as outlined in the traffic study completed as part of the transportation element which is included as Exhibit 2. The Master Plan for Powder Mountain will add a much needed boost to the Powder Mountain Ski Area while also providing a unique on-mountain development that will include a well placed and well balanced mix of mountain uses that will provide Powder Mountain and maybe just as importantly, Weber County, with a project that is sustainable and advances the community goals of a Destination Recreation Resort.

Exhibit B
Proposed amended master plan

SUSTAINABILITY

The vision for development on Powder Mountain is to create a setting that exemplifies the core values of the Summit community and celebrates the inherent beauty of the natural landscape.

Core Values. We will create a built environment that:

- Is made for people and promotes quality of life.
- Pushes the limits of sustainable performance, as a result of our innovative mind-set and high level of knowledge.
- Merges urban living with the qualities of nature.
- Achieve net zero emissions over it's lifespan.
- Is functional, smart and aesthetically appealing, building on the best of the regional design tradition.
- Is robust, durable, flexible and timeless - built to last.
- Utilizes local resources and is adapted to local conditions.
- Is produced and maintained through partnerships founded on transparent collaboration across borders and disciplines.
- Employs concepts that are scalable and used globally.
- Profits people, business and the environment.

We are actively working to complement the ecosystem that currently exists on Powder Mountain through adherence to these core values and principles. It is our goal to uplift the economy and community through best practices that will lead the region in our approach to sustainability and community development.
We are filtering our decisions through the lens of environmental stewardship that encompasses waste, water, power, our building standards and the flow of transportation throughout our village among others.

ECONOMIC SUSTAINABILITY

As identified within the provided Benefit Analysis (Exhibit 4) the proposed Master Plan will provide the County with an economically sustainable development that will stand on its own two feet while providing substantial local and regional economic benefits.

COMMUNITY SUSTAINABILITY

Sustainable Development:
Powder Mountain aspires to a higher level of project wide sustainable development and is requiring green building practices as part of the Design Guidelines to insure the construction and maintenance of the project is sustainable. These requirements include energy efficiency, water conservation, limiting grading and limiting building footprint, using sustainable and locally sourced building materials, and limiting building heights to protect view. The requirements are detailed in Exhibit 3 - Design Guidelines, attached as part of this application.

Transportation:
Powder Mountain is proposing some of the most aggressive traffic mitigating elements ever seen in a development application. As identified in the traffic study, the project is providing mass transit alternatives to incentivize skiers to use existing and expanded UTA services, utilizing park and ride locations to shuttle additional guests to the mountain as well as providing internal shuttle and car share services limiting the total number of trips to, from and within the resort.

Other methods to reduce transportation impacts include encouraging alternative modes of transportation through site planning and building orientation that emphasize connections to sidewalks and trail networks. Homes should be placed and built incorporating easy connections for pedestrian and bike access to trails, sidewalks and streets.

The project is also providing those goods and services required by guests within the resort villages reducing the need for additional trips off the property. These will include such uses as a grocer, restaurants, theaters, shopping and recreational amenities among others.

Market Sustainability:
Variety is important to serve the wants and needs of a diverse community and ensure its sustainability. The product variety within the project will provide for market sustainability as well as foster an authentic community with a mix of residential products and commercial uses that will create real village life. Civic spaces and recreational opportunities will serve to further provide all residents and guests with both active and passive opportunities that range from skiing, mountain biking, hiking and organized outdoor events such as music festivals, Summit Outside, poetry readings, etc.

Open Space:
Encourage design that emphasizes the natural connection to open space and parks. Provide maximum continuity of open space and preserve important natural vistas that reinforce a sense of place and relationship to the natural environment. Integrate views and access into the open space trail network from homes. Promote the development of site plans that create attractive, comfortable outdoor spaces.

Topography:
Integrate natural site features such as topography, views and vegetation into site design. Building placement should follow contours rather than being placed at right angles to the prevailing slope. On sloping sites, staggering placement of homes along opposite sides of the street, rather than siting homes directly opposite one another, can provide better preservation of views. Use topography to create continuous green space connectivity between homes. Retain the maximum possible amount of natural vegetation.

Landscaping:
Hydrozoning, defined as "the grouping of plants that have similar water requirements," is a highly efficient design strategy for water irrigation systems and landscape planning. Strategies of hydrozoning, low-impact irrigation methods, and efficient watering schedules are to be included in all submitted landscape plans.

Fire protection:
A Community Fire Plan for the Wild land - Urban Interface (Exhibit 5) has been developed for the initial Phase 1 PRUD approvals for the 154 units at Powder Mountain. This plan shall be implemented for the remaining development at Powder Mountain and used as the standard for all fire safety planning and protection measures within the project.
Additionally, all structures will provide landscaping that creates a defensible space for calculating the fire hazard severity. This places an emphasis on utilizing fire resistant vegetation or growth within the planned landscape adjacent to all buildings to minimize the potential for transmitting fire from the native growth to any structure.

AESTHETICS

The goal of Summit Powder Mountain is to design sustainably driven, site responsive structures using regionally sourced, familiar and heritage materials oriented in clever ways to create truly progressive mountain architecture.

- Humble
- Site responsive
- Sustainably driven
- Familiar, regional and heritage materials in clever orientation. Classics with a twist.
- Subtle elements of surprise, wonder, awe
- Develop a new archetype of progressive mountain architecture
- Frame up inspiring views
- Build value through defining a functionally driven style
- Create a cohesive exterior vernacular while allowing interiors to highlight Owner's preferred finishes and furnishings

Define Summit Powder Mountain architecture as aesthetically timeless while featuring the pinnacle of new building methods that enhance the experience of living in the mountains.

Exhibit B
Proposed amended master plan

ENVIRONMENTAL STEWARDSHIP

Development areas are planned as compact neighborhoods to create real places. These are clustered to limit the footprint of the development thru location and tighter massing of buildings and uses preserving as much of the natural character of the land as possible. This careful integration of all proposed development is further exemplified in the following critical areas of resource management:

Water:
Powder Mountain is implementing requirements for indoor water as part of the Design Guidelines to reduce the project's average indoor water demand (and the associated wastewater generation) with a goal of 50 percent compared to State Water (and Wastewater) Design Requirements. This includes requirements for water efficient fixtures and appliances for new residential construction and limits on landscape irrigation to reduce the overall project water use by 20 to 25 when compared to other similar developments in Utah.

Powder Mountain is reducing irrigation water demands by limiting the amount of irrigated area allowed for each lot as part of the Design Guidelines. The Guidelines also require a water budget, weather based irrigation control, water efficient irrigation system, the use of native and low water plants and encourage opportunities for strategies that might include grey water and/or rainwater harvesting (in strict conformance with State law).

Wastewater:
Powder Mountain's goal to reduce indoor water use by 50 percent when compared to State requirements will also reduce wastewater generated by the project by 50 percent. The use of various advanced wastewater treatment techniques and reuse will also be considered for future phases of the project such as techniques for collecting and utilizing greywater (showers, bathroom sinks, washing machines) and rainwater are encouraged for use as supplemental landscape irrigation. Any storage and related equipment should be below grade or visually screened from neighbors and public paths. All gray and rainwater capture will comply with Utah State requirements.

Stormwater:
The state of the practice for drainage has progressed significantly over the past several years as an awareness of the need to implement best management practice (BMPs) has grown and NPDES regulations have been implemented. To help reduce runoff peaks and volumes from development areas, Powder Mountain will emphasize minimizing directly connected impervious areas to route runoff from impervious surfaces over landscaped or natural areas to slow down runoff and promote infiltration. Powder Mountain will also focus on reducing paved areas and directing stormwater runoff to buffer strips, and vegetated swales to slow down the rate of runoff, reduce runoff volumes, attenuate peak flows, and encourage filtering and infiltration of stormwater. Every effort will be made to maintain natural conditions and prevent the degradation of downstream water quality.

Energy:
Reducing energy use with more efficient buildings as well as incorporating solar, solar domestic hot water, geothermal and ground source heat pump to reduce traditional energy sources are all under consideration for Powder Mountain.

Solar Energy:
Site and building designs are to implement orientation strategies that optimize solar exposure and incorporate passive and active solar systems. Proper solar orientation can substantially reduce energy costs and should be applied wherever possible. Site and building design are to be energy efficient and incorporate natural cooling and passive solar heating. This may include:

a. Thermal or Active Solar Panels
(can incorporate radiant heating systems)
b. Extended Eaves
c. Window Shade Elements
d. Awnings
e. Strategic Tree Placement
(for both shading and wind buffering)
f. Strategic Building and Window Orientation

The Design Guidelines address increasing the efficiency of heating buildings using passive solar and day-lighting energy building design, solar hot water and space or water heating using solar-thermal panels. The Design Guidelines include opportunities for direct solar (photo-voltaic panels) as well as increasing the efficiency of heating buildings using passive solar and day-lighting energy building design, solar hot water, and space or water heating using solar-thermal panels.

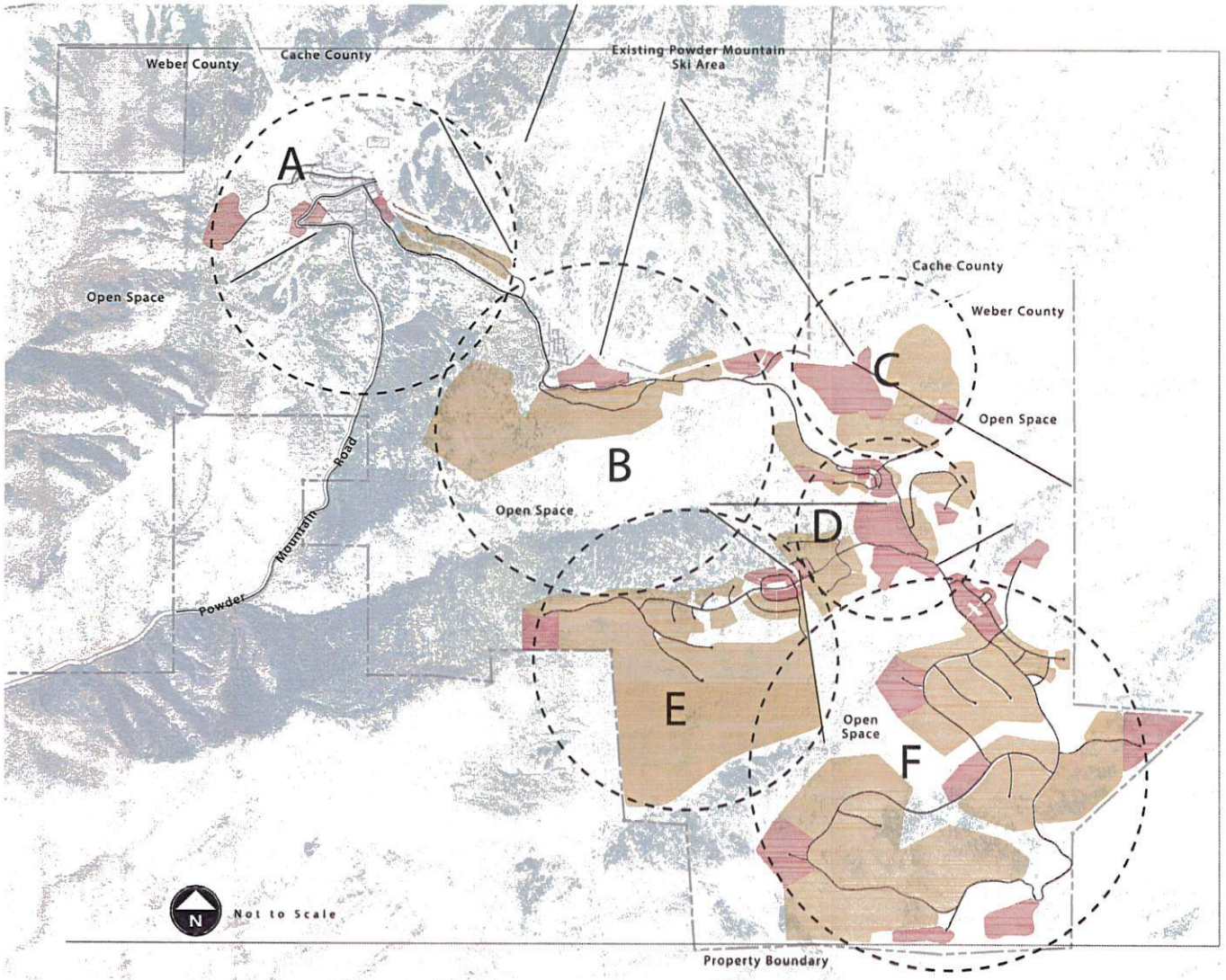
Powder Mountain is also exploring a solar garden approach to delivering power to the community. A solar garden approach would require the placement of solar panels in locations that are environmentally appropriate and aesthetically pleasing and Powder Mountain would work with the Utah Division of Wildlife Resources to ensure that any proposed site would minimize potential impacts to wildlife and wildlife habitat.

Geothermal Energy:
Powder Mountain's Design Guidelines also encourage alternative energy strategies like geothermal exchange heat pumps. Heat pumps utilize the subsurface ground which maintains an almost constant temperature of 50-60 degrees Fahrenheit. Since the ground is warmer than the air above the surface in the winter and cooler in the summer, geothermal heat pumps use a ground heat exchanger and a pump unit to heat and cool buildings and heat water. They use less energy than conventional heating and cooling systems and are more efficient, saving energy, money and reducing air pollution. Powder Mountain is also exploring community wide geothermal solutions.

Wind:
Wind energy systems may be allowed and should be considered as portions of the Powder Mountain property offer the potential for ideal wind energy systems but these systems must be sensitive to the community and environmental impacts they can create and any system proposed must comply with local land use code requirements and will be subject to review and approval by the Architect's Review Committee as well as coordinated with the Utah Division of Wildlife Resources.

Exhibit B
Proposed amended master plan

Overall La



The Overall Land Use Plan depicts general areas for development within the proposed Rezone boundary. These areas indicate general land use areas and roadway circulation proposed.

Each development area identified is represented in greater detail within this Rezone Application.

DEVELOPMENT AREAS

Area A - Mid-Mountain
Area B - The Ridge
Area C - Earl's Village
Area D - Summit PM Village
Area E - Gertsen
Area F - The Meadow

DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

DEVELOPMENT DATA

HOTELS	1,218 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	159,000 SF
RETREATS	180 ROOMS
RESIDENTIAL	2,334 UNITS
TOTAL UNITS	2,800 UNITS

NOTES:

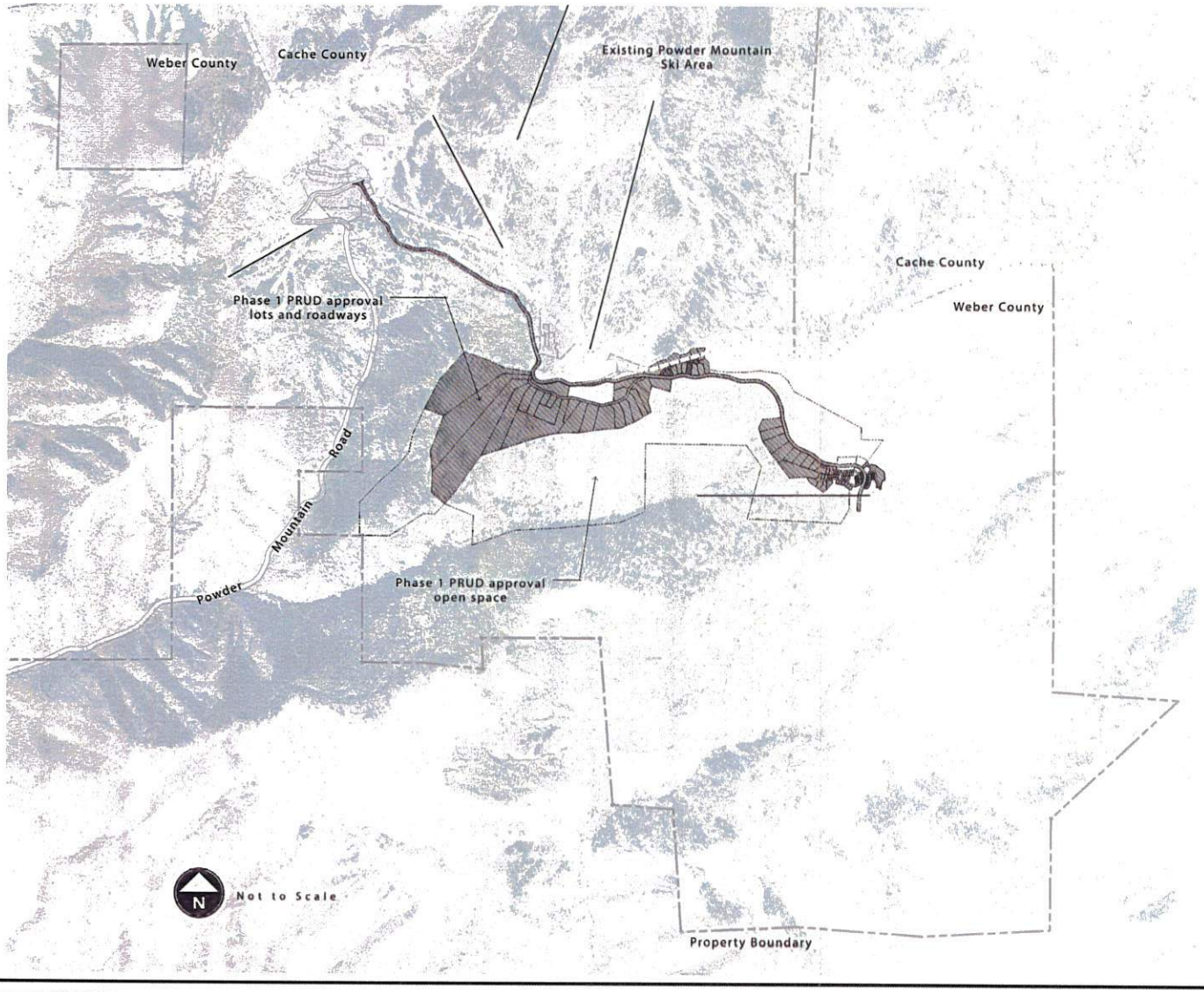
1. MIXED USE LAND USE INCLUDES ALL PERMITTED OR CONDITIONAL USES AS IDENTIFIED WITHIN THE DRR1 ZONE (SEC. 104-29-8)

2. RESIDENTIAL USES SHALL INCLUDE ALL PERMITTED OR CONDITIONAL USES AS IDENTIFIED FOR RESIDENTIAL USES WITHIN THE DRR1 ZONE (SEC. 104-29-8)

3. HOTEL AND RETREAT ROOMS EQUAL .33 UNITS EACH FOR DENSITY CALCULATIONS

Exhibit B
Proposed amended master plan

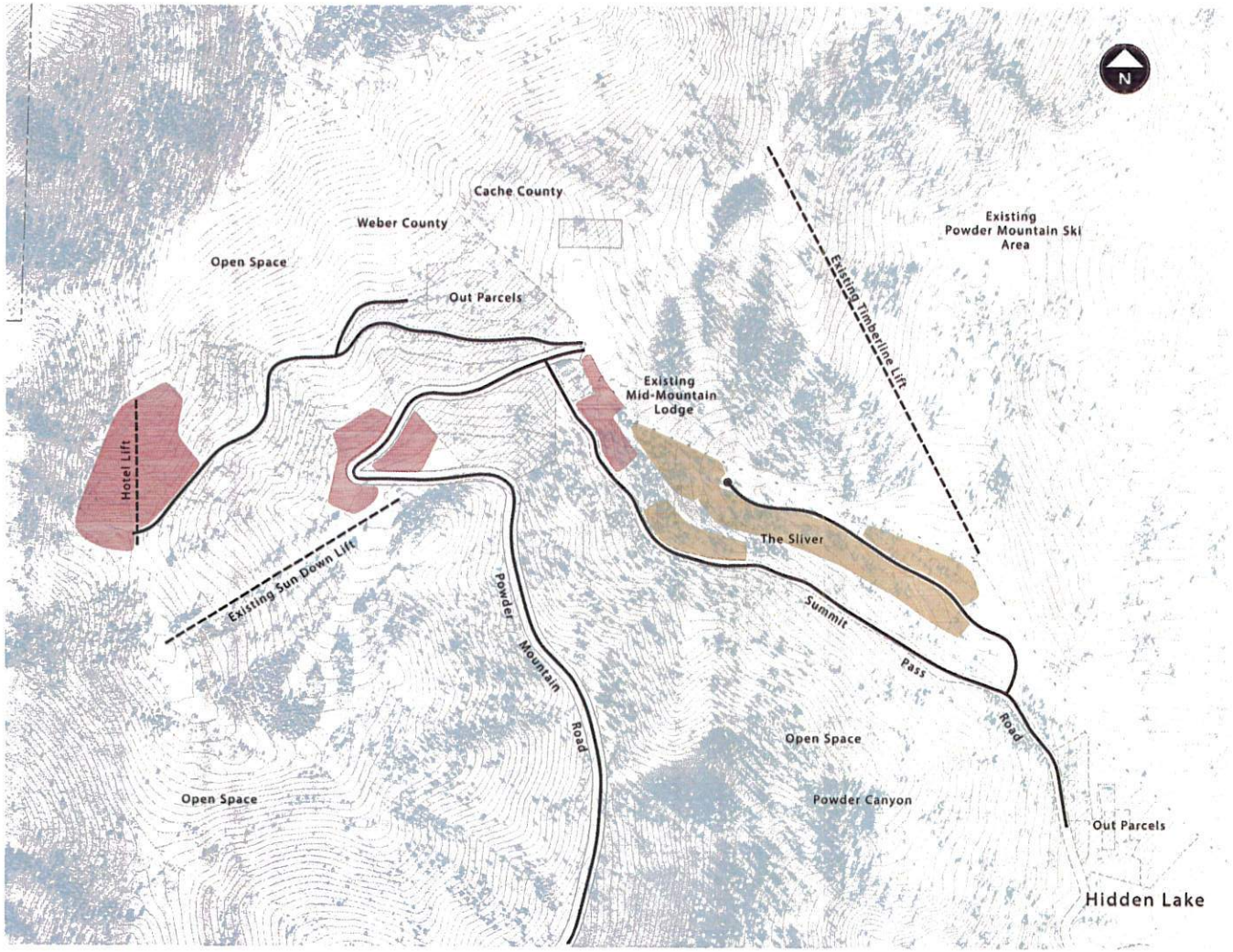
Existing Pha



This Master Plan exhibit identifies the approved PRUD project area that includes 154 units and is identified as Phase 1 of the Summit at Powder Mountain community. This approval includes 154 units that are comprised of a mix of large ranch lots, estate single family lots, single family nests, single family village lots and single family zero lot line lots within the Summit Powder Mountain Village. Phase 1 approvals stretch across the Ridge development area and into the Summit Powder Mountain Village and includes approvals and plats for all units and the roadways dedicated to serving these units and as shown here.

Concept Development Plan- Area A: Mi

Exhibit B
Proposed amended master plan



Mid-Mountain is the entry portal to Summit Powder Mountain. This area will provide a subtle entry into the Resort with a mix of Hotel, townhome and single family development opportunities that will support the beginner ski area at Sundown as well as the existing ski access to the mountain at the Mid Mountain Lodge.

DEVELOPMENT LEGEND

MIXED USE
HOTEL
COMMERCIAL
SKI LODGES & SERVICES

RESIDENTIAL

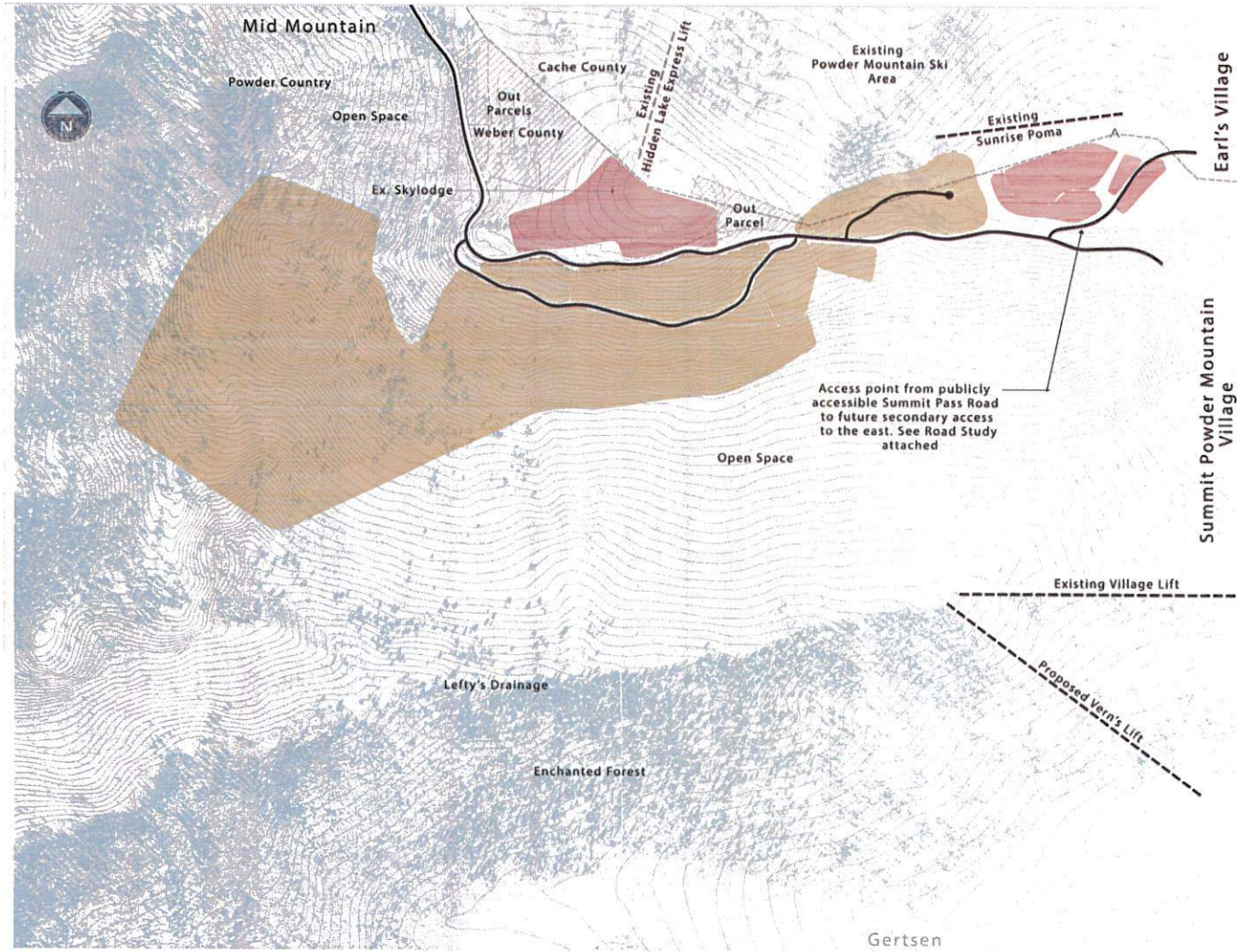
DEVELOPMENT DATA

HOTELS	108 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	10,000 SF
RESIDENTIAL	155 UNITS

KEY MAP

Concept Development Plan- Area B

Exhibit B
Proposed amended master plan



The Ridge development area includes hotel and associated skier lodges/skier services as well as multi family units all centered around the "top of the mountain" and existing and proposed top lift terminals providing the classic Powder Mountain ski experience. Remaining development areas provide a mix of small "nests" tucked among existing vegetation and a mix of single family lot sizes providing dramatic views to Mount Ogden, the Wasatch Range and the Great Salt Lake.

DEVELOPMENT LEGEND

- MIXED USE
  - HOTELS/RETREAT
  - COMMERCIAL
  - SKI LODGES & CONF. CENTER
- RESIDENTIAL

DEVELOPMENT DATA

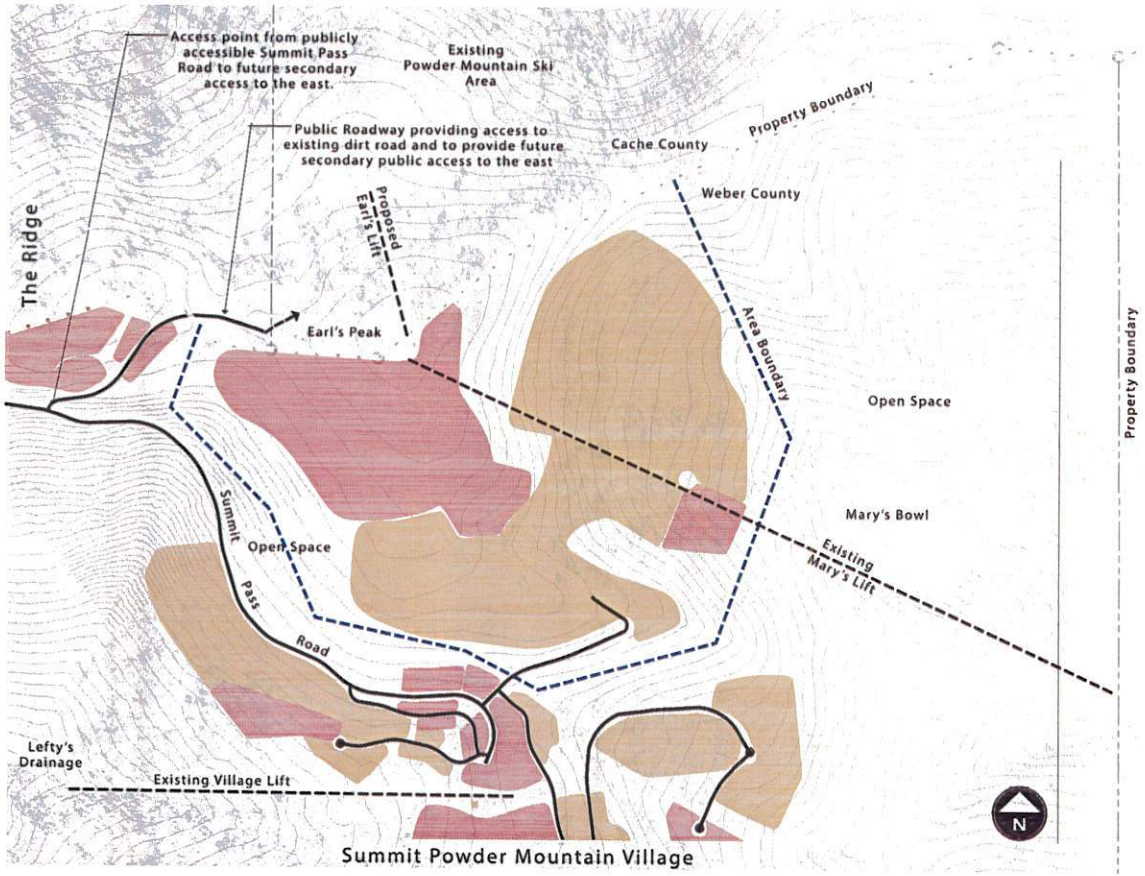
HOTELS	180 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	19,000 SF
RESIDENTIAL	159 UNITS

KEY MAP

Concept Development Plan- Area C: E

Exhibit B
Proposed amended master plan

Earl's Village continues the Summit Powder Mountain tradition of starting your day at the peak skiing down from the top of the mountain. The Village provides a mix of hotel and multi-family development parcels with ski access in three directions and with views that are unmatched in the West. Earl's Village sits above the more boutique Summit Village providing the classic ski mountain village anchor to the Resort.



DEVELOPMENT LEGEND

MIXED USE

RESIDENTIAL

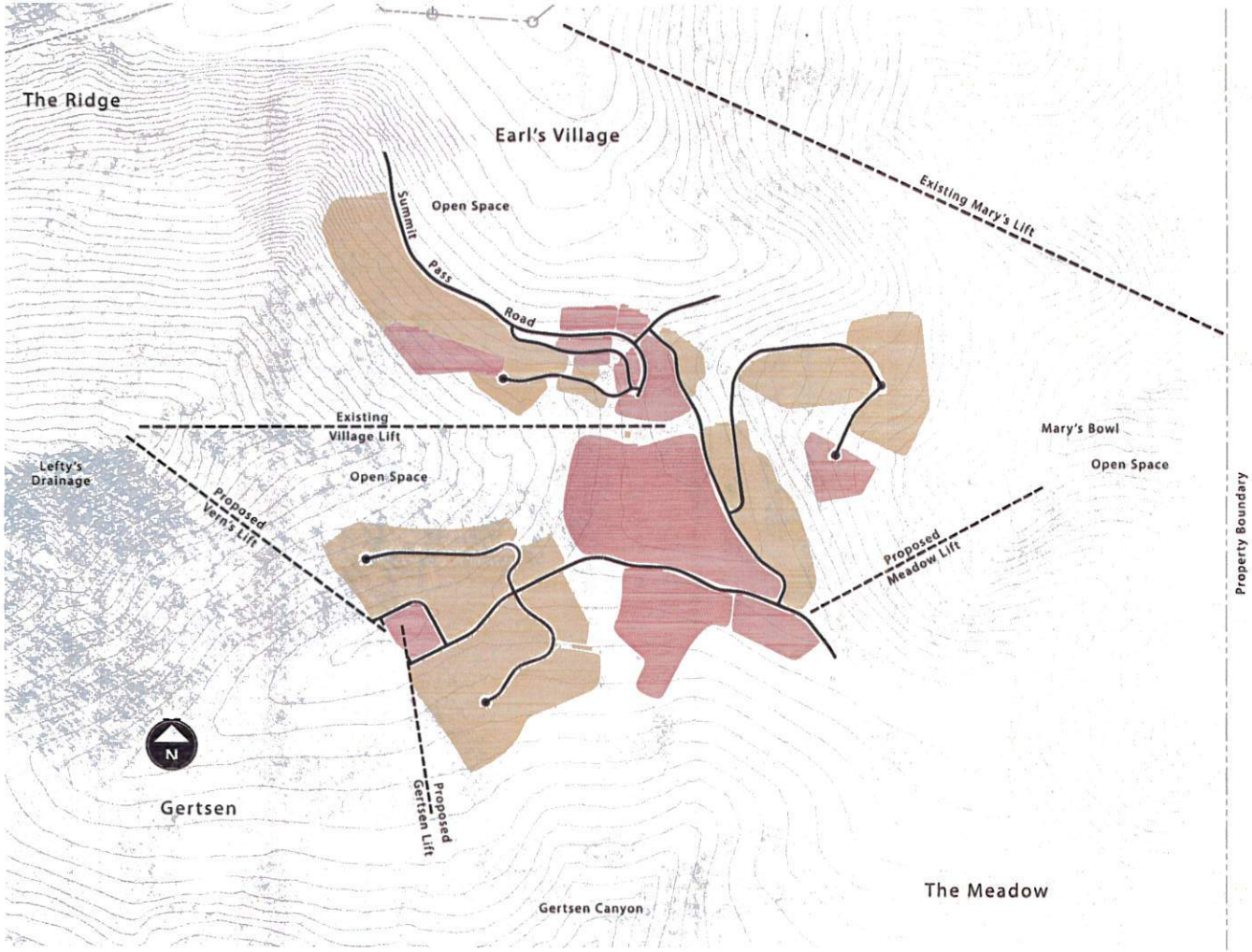
DEVELOPMENT DATA

HOTELS	240 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	40,000 SF
RESIDENTIAL	814 UNITS

KEY MAP

Concept Development Plan- Area D: Summit Powder Mountain

Exhibit B
Proposed amended master plan



Summit Powder Mountain Village is the activity center for the Resort with Main Street retail shops, destination amenities such as lodges, public plazas, recreational facilities and trail heads to access the outdoors. The Summit Powder Mountain Village is modeled after small mountain villages in North American and Europe with walkable, interconnected streets and is made up of boutique hotels, condominiums, townhomes, small single family lots and "nests" making it the most diverse development area at the Resort.

DEVELOPMENT LEGEND

- MIXED USE
- RESIDENTIAL

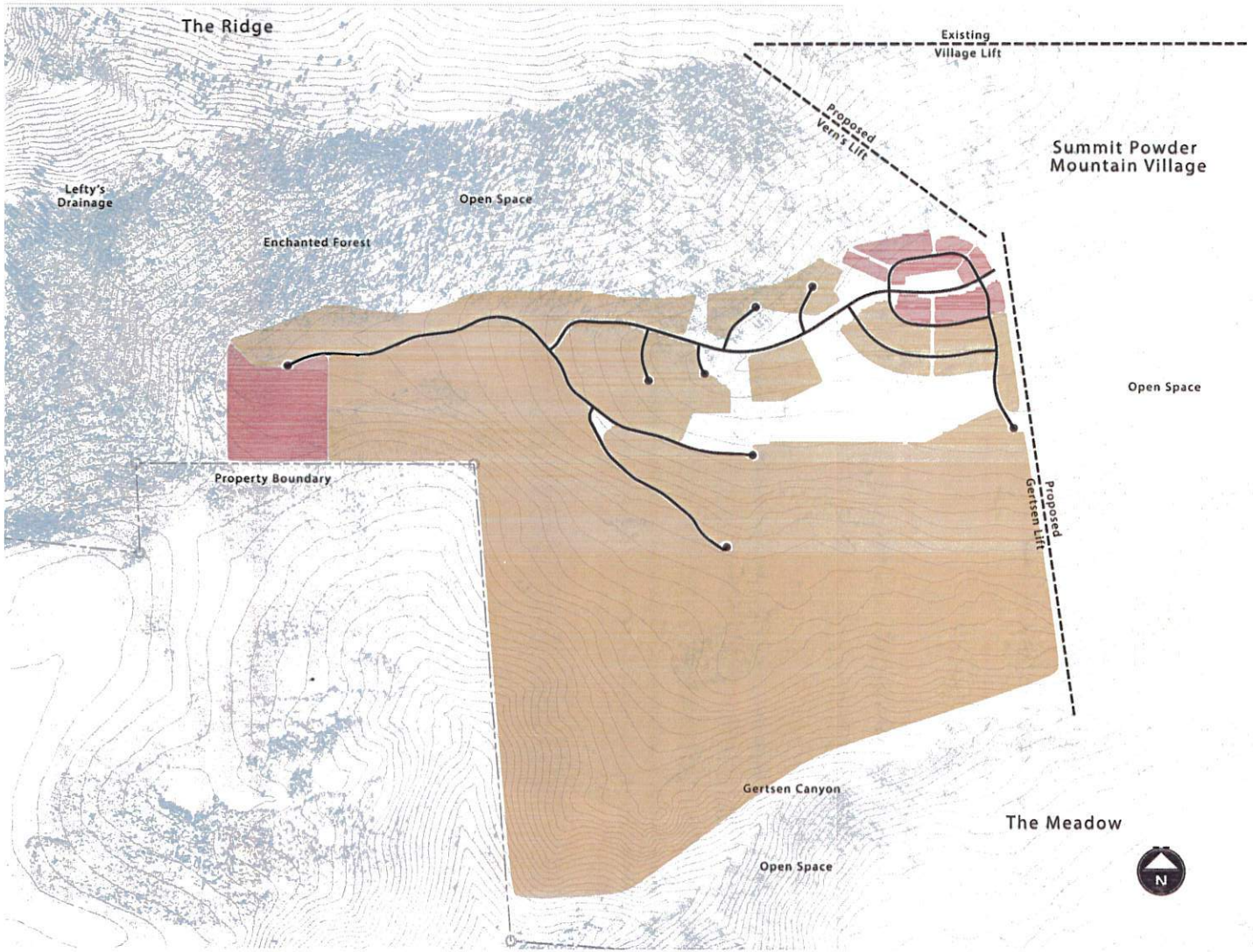
DEVELOPMENT DATA

HOTELS	500 ROOMS
COMMERCIAL/SKIER SERVICES/CONF. CENTER	100,000 SF
RETREATS	90 ROOMS
RESIDENTIAL	604 UNITS

KEY MAP

Concept Development Plan- Area

Exhibit B
Proposed amended master plan



The Gertsen development area transitions from the more dense Earl's and Summit Powder Mountain Villages to less intense multi family and single family units as the project moves to the project boundary. A small, organized node of multi family townhomes, "nests" and smaller lot single family units anchor the top terminals of the proposed Vern's and Lefty's lifts with lots getting progressively larger as you move west and down the hill. Here larger estate and ranch lots are tucked into large expanses of aspens and along the edge of the Enchanted Forest.

DEVELOPMENT LEGEND

- MIXED USE
- RESIDENTIAL

DEVELOPMENT DATA

HOTELS	60 ROOMS
RESIDENTIAL	243 UNITS

KEY MAP

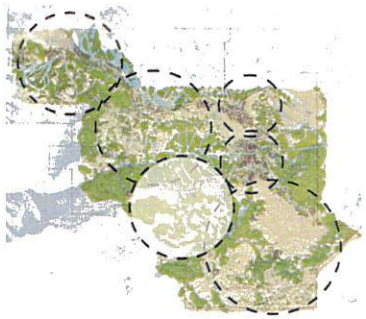
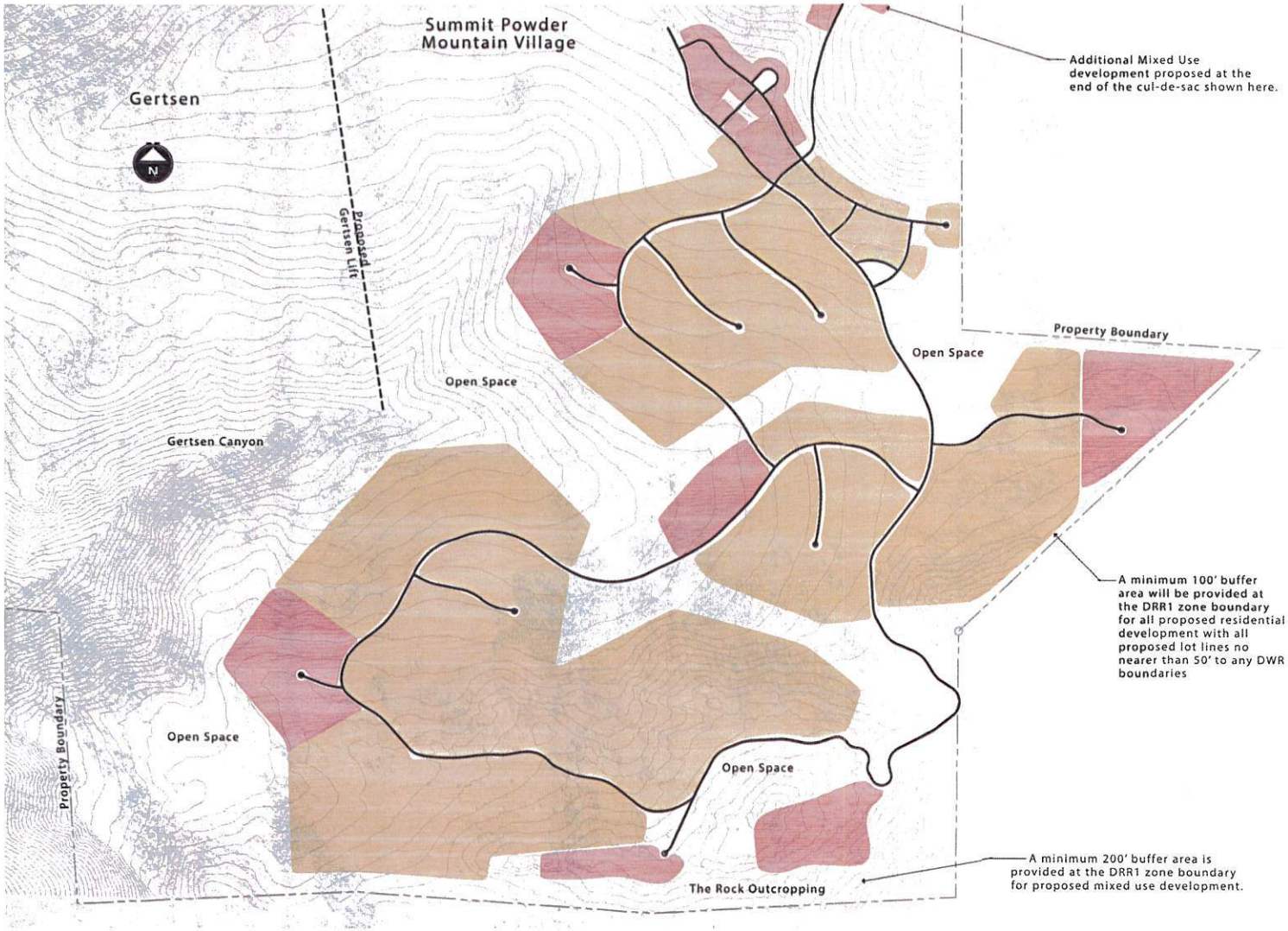


Exhibit B
Proposed amended master plan

Concept Development Plan- Area F: T



The Meadow Master Plan transitions density from the most dense area of Summit Powder Mountain Village to the project's south edge. The north edge of the Meadow development area maintains the structured road and lotting systems found in the Summit Powder Mountain Village but begins to loosen this development pattern thru the meadow and out to the rock outcropping with larger estate and ranch lots. The south edge of the development area is a location identified for a small, exclusive boutique hotel and retreat providing a destination anchor to the resort with views overlooking the Ogden Valley and Mount Ogden.

DEVELOPMENT LEGEND

MIXED USE

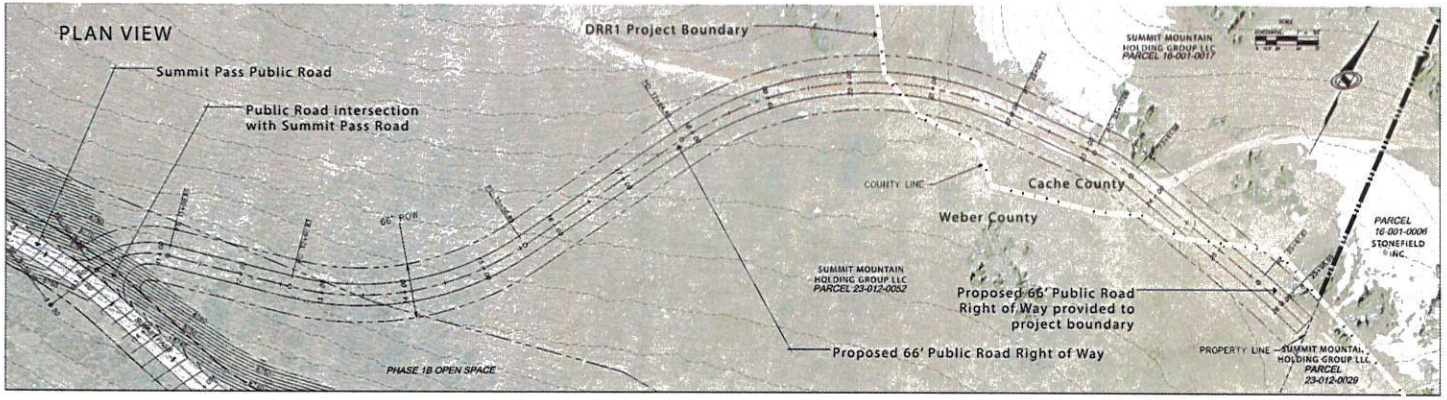
RESIDENTIAL

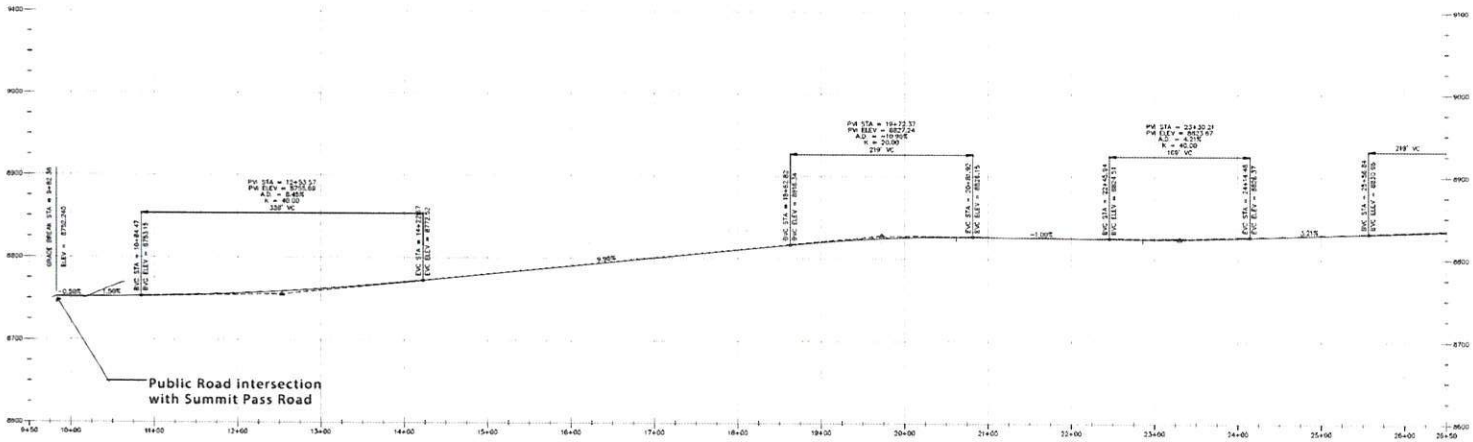
DEVELOPMENT DATA

HOTELS	130 ROOMS
RETREATS	90 ROOMS
RESIDENTIAL	359 UNITS

KEY MAP

Exhibit B
Proposed amended master plan





ROADWAY PROFILE

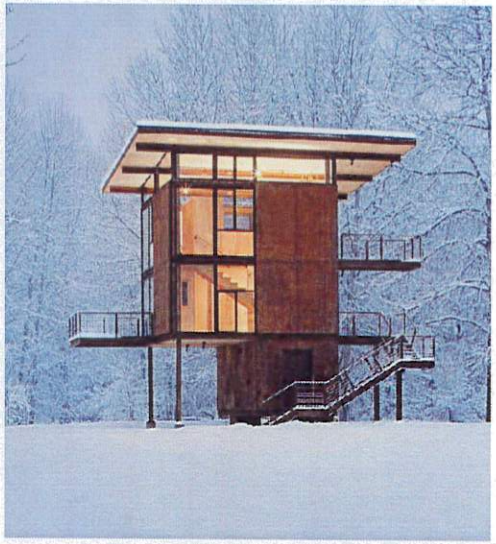
Powder Mountain is committing to a public road right of way that will enable a secondary roadway link thru the resort to the east via Cache County. This public access road right of way would utilize Powder Mountain Road, Summit Pass and this proposed roadway to provide a feasible point of connection for a future roadway access to the east. Prior to any right-of-way dedication, Developer and the County shall agree on the maintenance of the right-of-way.

This stub is being provided at a point adjacent to the Stonefield, Inc. parcel within Cache County and is stubbed at a location with topography that is feasible for a roadway extension. Any roadway alignment provided further east of this point is off of the subject property and would therefore require those property owners to provide access. This access extension, design, location etc. is to be determined at a later date and is not part of this rezone application.

KEY MAP

Exhibit B
Proposed amended master plan

Architectural Prece



The Summit community shares a philosophy of innovation, creativity, cultural enrichment and environmental conservation. At Powder Mountain, those core principles come to life in a mountain development of single-family home sites, clusters of nests and a lively village center on 6,160 acres of untouched land in the Wasatch mountain range. Homes will be tucked in clusters of pine and aspen trees to maintain natural views for all community members and The Village will be dense with living accommodations to allow for more open space in wildlife-sensitive areas. Each building design will meet recognized environmental standards and energy conservation guidelines will be provided to incorporate cutting-edge sustainability systems and materials. Buildings will incorporate broad roof lines and indoor-outdoor spaces and will emphasize natural materials, like stone and wood, that suit the local landscape. This modern mountain design aesthetic is essential and should be interpreted with innovation and creativity to add value to the community.

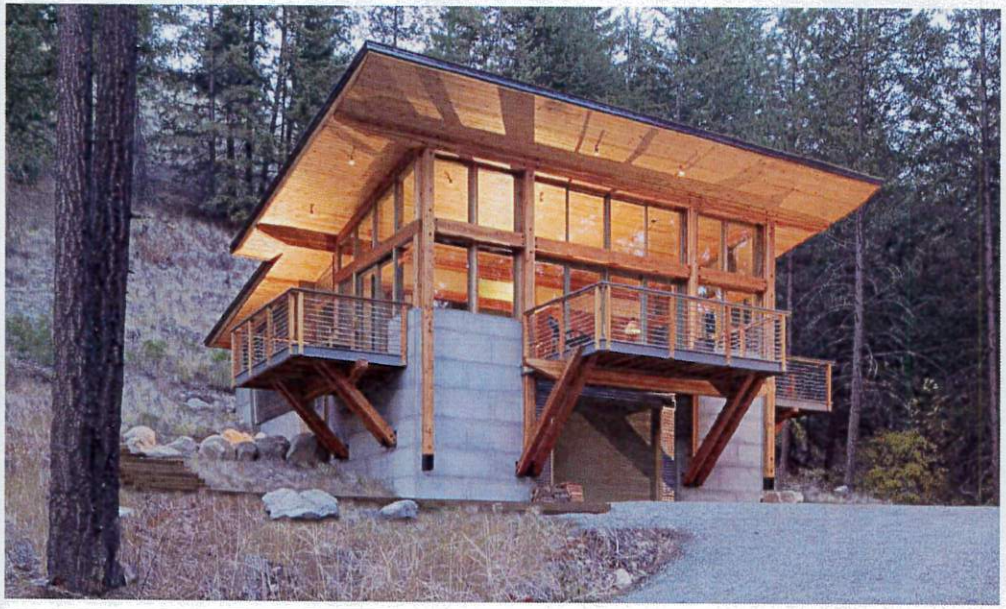
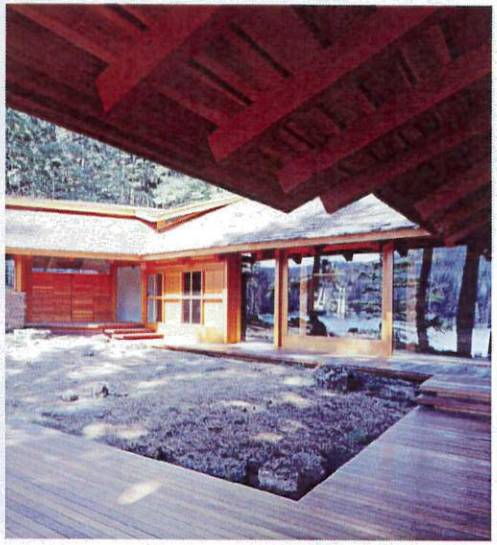


Exhibit B
Proposed amended master plan

Architectural Precedents: Mour

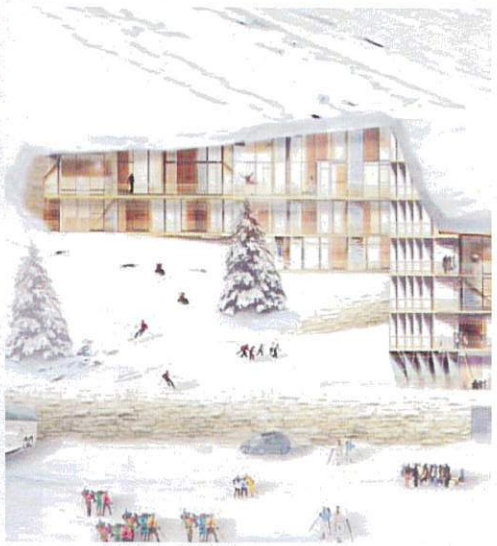


Building design at Powder Mountain will preserve the pristine views and natural beauty while creating an identifiable and cohesive modern mountain design aesthetic. "Modern mountain" is intentionally open-ended in its definition. While designers and architects will adhere to specific site, landscape, massing and sustainability requirements, the architectural guidelines are considered an ethos and to be applied with innovation and creativity.

Architecture is subservient to the natural landscape. Fenestration open to mountain views should be enhanced by building and site design. The land and its magnificent panoramas shall remain the dominant design feature, and improvements are not to detract from the site's natural surroundings. Buildings should maintain a low profile and are to be sited to minimize grading by following the natural undulation of the topography. Building masses and articulation are to create shadow, texture, and patterns that help buildings recede into the landscape rather than dominate it.

Exhibit B
Proposed amended master plan

Architectural Precedents: Hotels &



Building and landscape materials will be used that are natural in appearance and available locally or regionally. All houses and landscape structures at Powder Mountain are to be built of materials that appear to have been taken from the site and/or nearby resources in order to reinforce the connection between buildings and their natural surroundings.

All buildings, site landscaping and construction at Powder Mountain should be healthy, durable, restorative, and a complement to the natural landscape. The design of the site and buildings must incorporate sustainable building design and construction practices, including: utilization of renewable and highly efficient energy systems, green building materials, recycling of construction waste, utilization of natural day lighting and water conservation measures.

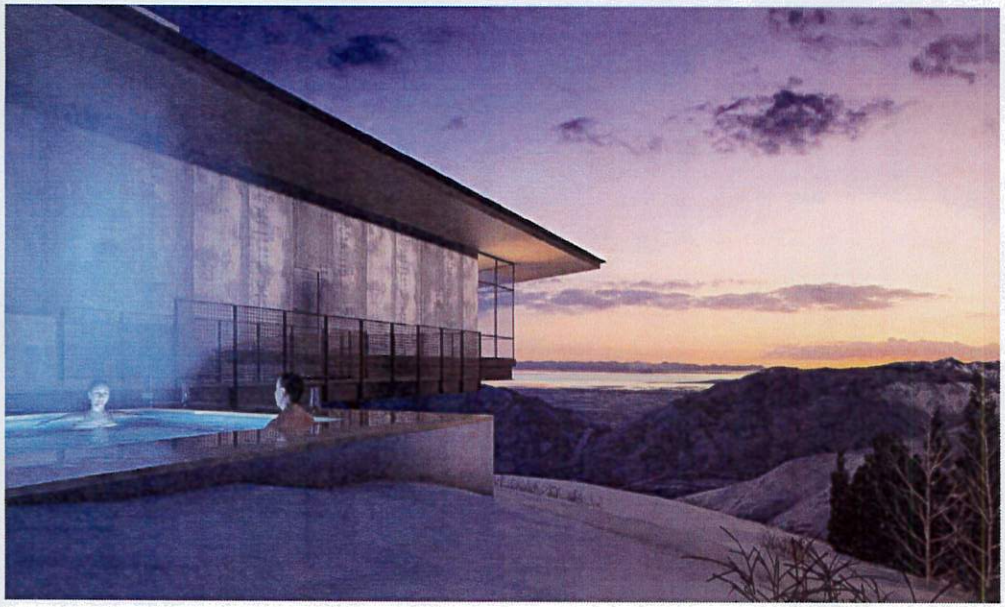
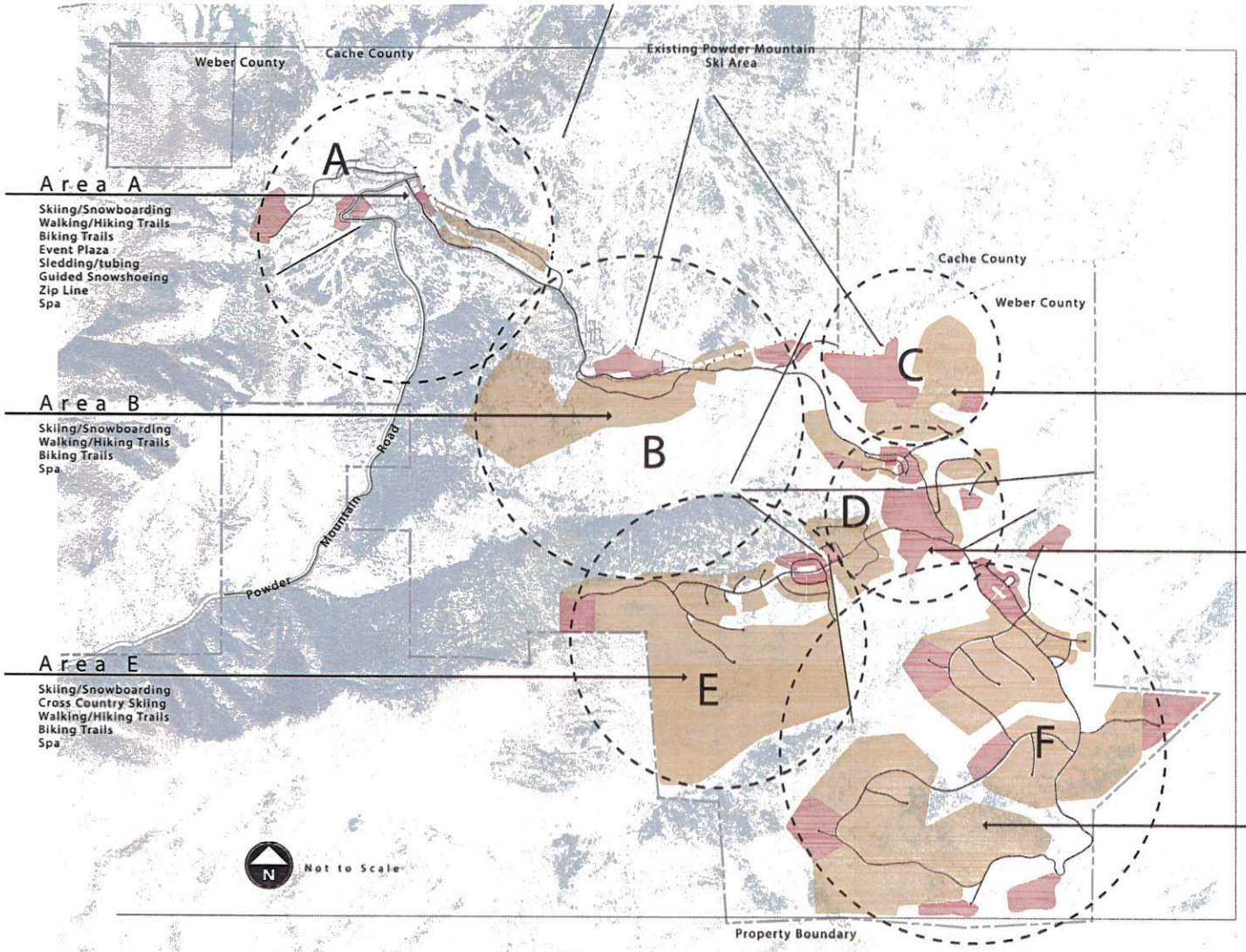


Exhibit B
Proposed amended master plan



The Powder Mountain Master Plan offers a wide variety of recreational activities for its residents, visitors and the local community. Each area offers different amenities and activities based on the identity, location and needs of that particular community. For example, Area A offers predominantly mountain-based amenities while Area F offers more passive recreational activities including trails. Multi-use trails meander throughout the entire property's open space and cater to walking, hiking, mountain biking, snowshoeing and equestrian uses. All Recreation Facilities are available to the public. Some uses will be fee based such as skiing, guided events, spas, etc.

Uses will be phased with the related development area phasing.

Area A

Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Event Plaza
Sledding/tubing
Guided Snowshoeing
Zip Line
Spa

Area B

Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Spa

Area C

Skiing/Snowboarding
Kite Boarding
Walking/Hiking Trails
Biking Trails
Equestrian Trails
Events Plaza
Ice Skating
Spa

Area D

Skiing/Snowboarding
Walking/Hiking Trails
Biking Trails
Kid's Camp
Event's Plaza
Guided Snowshoeing
Ice Skating
Amphitheater
Sledding/tubing
Swimming
Indoor Recreation Facility
Zip Line
Geo-caching
Spa

Area E

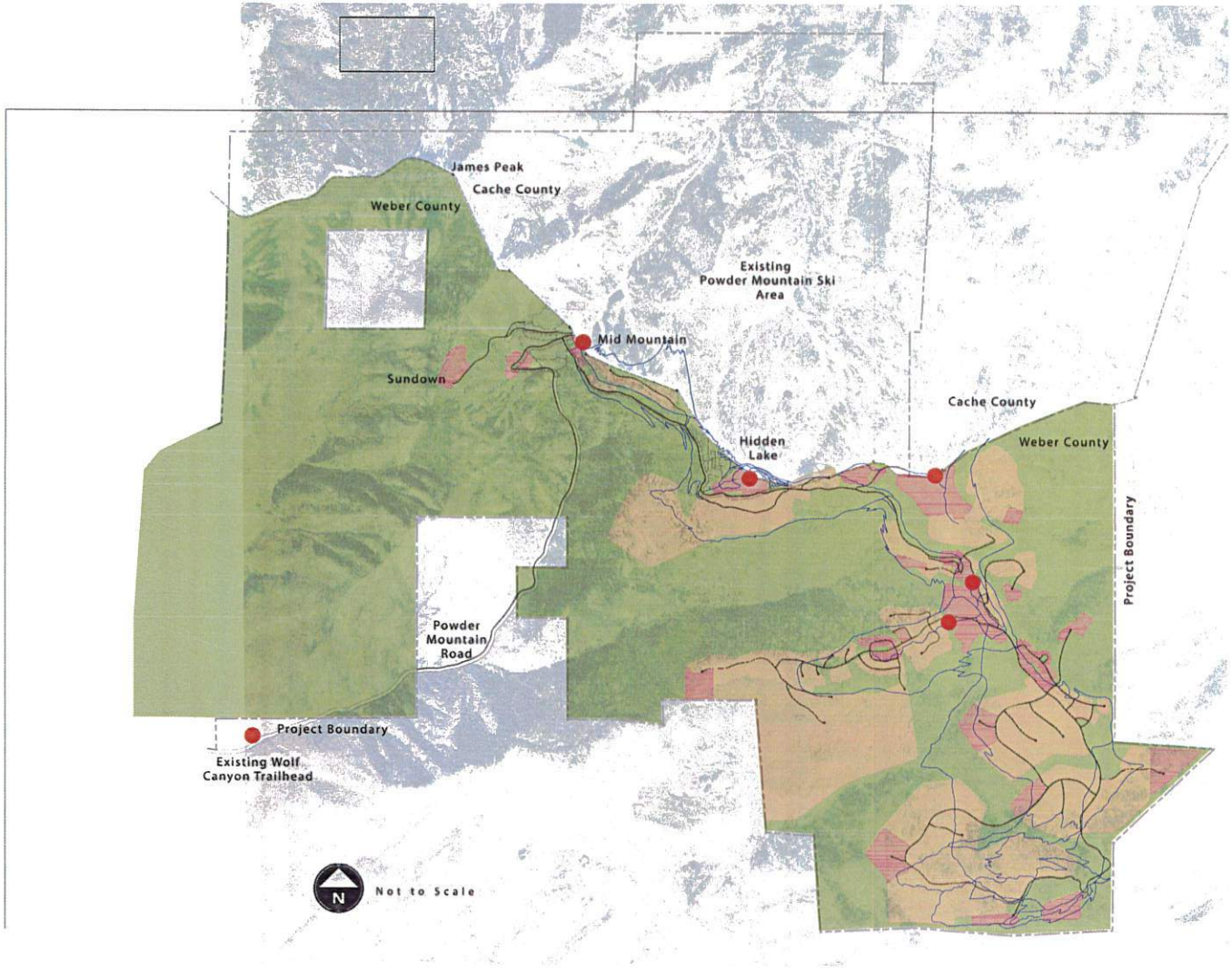
Skiing/Snowboarding
Cross Country Skiing
Walking/Hiking Trails
Biking Trails
Spa

Area F

Walking/Hiking Trails
Cross Country Skiing
Biking Trails
Equestrian Facility
Equestrian Trails
Adventure Course
Spa

Open Space wit

Exhibit B
Proposed amended master plan



The Open Space and Trails System diagram illustrates project trails that will connect neighborhoods to one another and to the regional trail network. Powder Mountain is committed to providing Regional Public Trail Connectors thru the project (shown in blue) to insure public trail access to and thru the project. Powder Mountain will work with the adjacent landowners, UDWR and Weber Pathways to provide these connections. A priority has been placed on creating loops within the project. The loop trails shown (in Green) were developed in conjuction with Weber Pathways and the International Mountain Biking Association to provide beginner level trail loops as shown. In addition, there will be a variety of trails within and around each development area that will include multi-use trails, single-track for mountain biking and general use trails for walking and hiking.

OPEN SPACE CALCULATION

Approximately 6,160 acres of the Powder Mountain property are located in Weber County. In Weber County, approximately 76 percent (4,740 acres) of the total land has been preserved as total open space. In order to calculate the open space per the DRR1 zone requirements, the approximate 2,100 acres that have slope more than 40 percent were subtracted from the total acres, resulting in an Adjusted Gross Acreage of approximately 4,060 acres. Development is planned on approximately 1,500 acres, leaving 2,560 acres or 63% of the Adjusted Gross Acreage preserved as open space.

DEVELOPMENT LEGEND

- MIXED USE
- OPEN SPACE
- RESIDENTIAL
- INTERNAL PUBLIC LOOP TRAILS
- TRAILHEAD OR ACCESS NODE

Exhibit B
Proposed amended master plan

Uses	# Employees Generated	Per Room/SF	Source
Resort Operations			Powder Mountain Ops
Hotel	0.7	1 Room	Canyons
Multi Family & Nests Rental	0.3	1 Room	Canyons
Retail	2	1,000 SF	Weber County DRRO
Office	2.3	1,000 SF	Weber County DRRO
Restaurant/Bar	3.5	1,000 SF FF	Weber County DRRO
Estimated # of Employees in WF housing Unit	1.65		Weber County DRRO
Required # of Seasonal WF Housing Units	0.1		Weber County DRRO

Phase 1 - 1,477 Units

Uses	Total Rooms or SF	% in Rental Pool	Rental Units	FTEE Employees Gen.	Emps/WF Unit (/1.65)	Required # Units (10%)
Hotel	818	-	-	573	347	35
Multi Family & Nests Rental	656	50%	328	98	60	6
Retail	75,000	-	-	150	91	9
Office	19,000	-	-	44	26	3
Restaurant/Bar	25,000	-	-	88	53	5
			Totals	952	577	58

Overall - 2,800 Units

Uses	Total Rooms or SF	% in Rental Pool	Rental Units	FTEE Employees Gen.	Emps/WF Unit (/1.65)	Required # Units (10%)
Hotel	1,218	-	-	853	517	52
Multi Family & Nests Rental	1,596	50%	798	399	242	24
Retail	100,000	-	-	200	121	12
Office	29,000	-	-	67	40	4
Restaurant/Bar	30,000	-	-	105	64	6
			Totals	1623	984	98

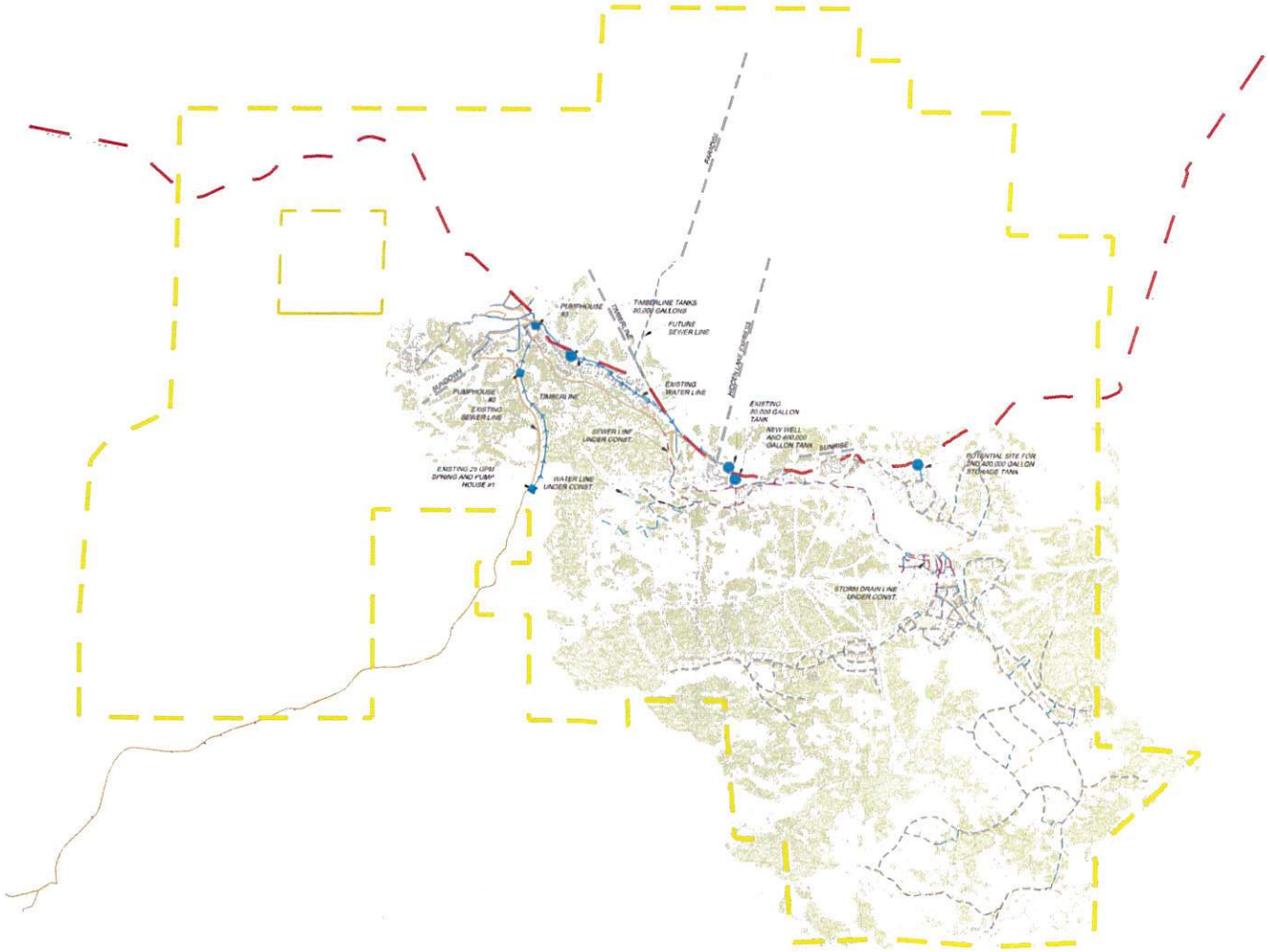
Employee generation at Powder Mountain has been calculated according to the formula in the Destination and Recreation Resort Ordinance. It is estimated that a total of 1,623 full time equivalent employees (FTEE) will be generated by Powder Mountain at full build out with 960 FTEE projected for the proposed Phase 1 development . These workforce additions will primarily be located within the Earl's Village and Summit Powder Mountain Village but will include employees servicing communities throughout the project. Only those employees generated due to development within Weber County have been calculated as part of this plan.

At full build out, Powder Mountain will generate the overall need for 984 workforce housing units and will be required to provide approximately 98 of these workforce housing units. These housing units may be provided in the form of group dwelling (dormitories) or multi-family dwelling (condominiums/townhomes) within the Resort, and will be phased with development. Conceptually, the seasonal employees will be housed in the Mid Mountain and Summit Powder Mountain Village Areas, as identified on the proposed Powder Mountain Master Plan, nearest their employment to reduce the need for automobile use. It is estimated that the additional 886 units will be located off-site to support the seasonal workforce housing requirements. With the proximity of Ogden and the Ogden Valley to the resort and the availability of mass transit alternatives and the further development of these mass transit alternatives as per the Traffic Study (Exhibit 2) there exists available seasonal housing options to serve the resorts needs. Additionally, the upper alpine elevation and unpredictable nature of the resorts winter weather makes the Ogden Valley and Ogden ideal for the majority of the employee base to reside on a day to day basis. Here, employees and their families are near to and have reliable access to essential goods and services such and schools and shops.
In order to ensure affordable housing remain available and affordable in perpetuity, the on mountain seasonal workforce housing units will be deed restricted. Upon request, an annual report that outlines the previous year's employment level, workforce housing needs, housing type/availability and occupancy will be generated and presented to Weber County Planning Staff.

Wet Utiliti

Exhibit B
Proposed amended master plan

The wet utilities diagram illustrates the existing and proposed water, wastewater and storm drain infrastructure on site at Powder Mountain. The majority of the existing infrastructure is located in and around the mountain operations including the Mid Mountain and Hidden Lake areas



LEGEND

- COUNTY LINE
- PROPERTY BOUNDARY
- EXISTING SKI LIFT
- FUTURE SKI LIFT
- EXISTING SANITARY SEWER LINE
- EXISTING STORM DRAIN LINE
- EXISTING WATER LINE
- SANITARY SEWER LINE (FUTURE)
- STORM DRAIN LINE (FUTURE)
- WATER LINE (FUTURE)
- SANITARY SEWER LINE (UNDER CONSTRUCTION)
- STORM DRAIN LINE (UNDER CONSTRUCTION)
- WATER LINE (UNDER CONSTRUCTION)

Exhibit B
Proposed amended master plan

Dry Utiliti

The existing and proposed dry utilities map illustrates the on and off-site power, gas and communications infrastructure at the Powder Mountain Resort.

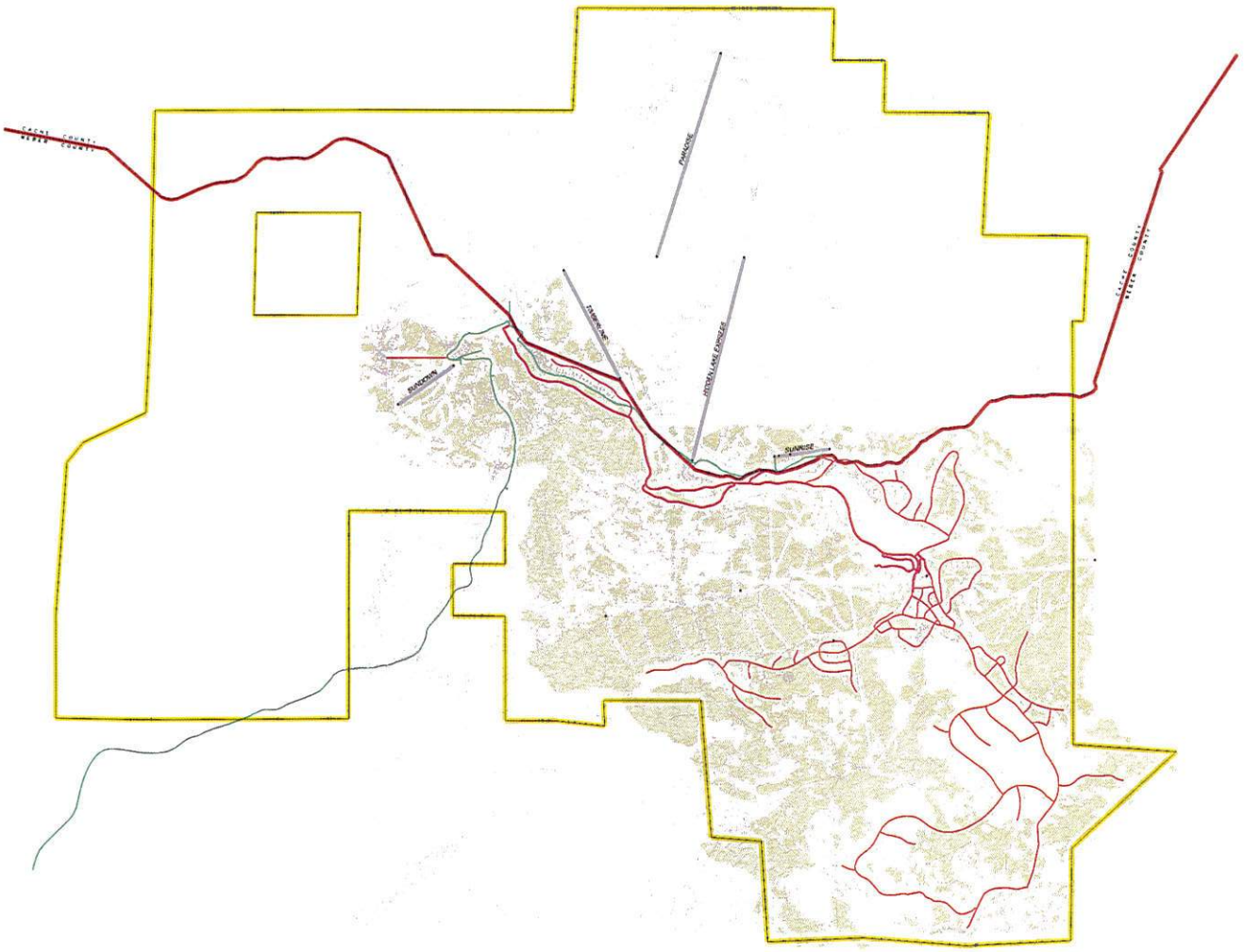


Exhibit B
Proposed amended master plan

Conceptual Stormw

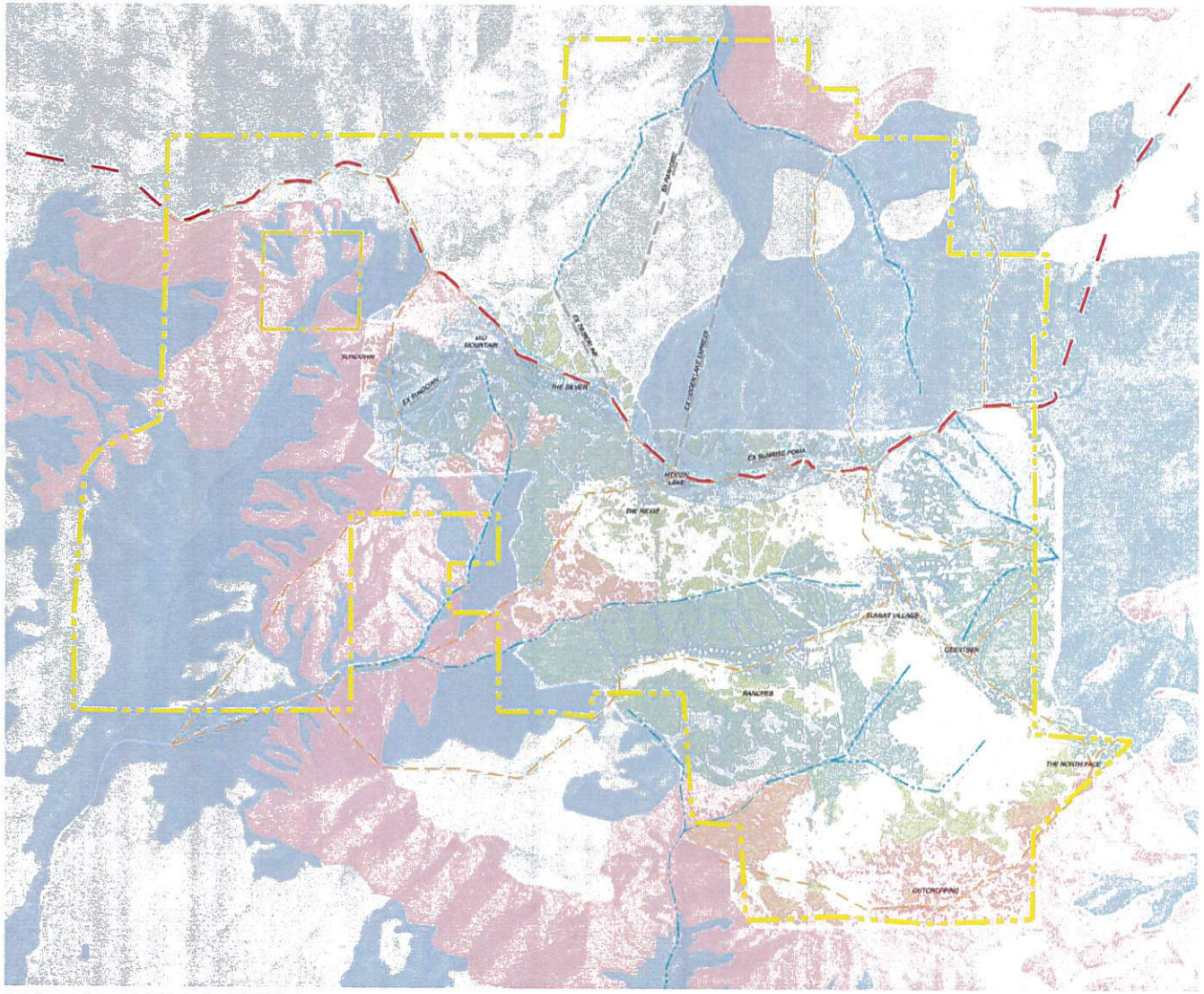


Exhibit B
Proposed amended master plan

WEBER FIRE DIST

2023 W. 1300 N.
Farr West, UT 84404
(801) 782-3580
Fax (801) 782-3582

July 2, 2014

Rick Everson
Watts Enterprises
5200 South Highland Drive, STE 101
Salt Lake City, Utah 84117

RE: Will Serve Notice

The project at the Powder Mountain area includes multiple phases of development with the potential of 2,800 residential units. The project area is within the jurisdictional boundaries of the Weber Fire District. Weber Fire District currently has two fire stations located in the Upper Valley area that have been and will continue to serve the Powder Mountain area. The closest station to the project site is Station 62, located at 5550 East 2200 North, Eden. Weber Fire District will serve the project area from these two locations supported by units from the lower valley.

When the number of residences and/or commercial structures warrants it; or when the number or incidents in the new developed area warrants it, a new fire station facility may be needed to serve the area. If the build-out reaches its full potential, a fire station in the area will most likely be needed. It would be wise of the developer to consider this and to work with the Fire District regarding response for emergency medical and fire related emergencies.

The development will be required to meet all applicable codes and rules, including fire codes.

If you have further questions, please feel free to contact myself or Chief Austin.

Sincerely,

Brandon Thueson
Fire Marshal

Chief, David L. Austin - Deputy Chief, Paul Sullivan - Fire Marshal, Brandon Thueson

Weber County Sheriff's Office

Terry L. Thompson
Sheriff

Klint D. Anderson
Chief Deputy
Law Enforcement Division

Kevin H. Burton
Chief Deputy
Corrections Division

Steffani Ebert
Administrative Assistant
Support Services Division

Law Enforcement Division
(801) 778-6600

Corrections Division
(801) 778-6700

Emergency Management
(801) 778-6680

Office Hours are
Monday through Friday
8:00 a.m. to 5:00 p.m.

721 W. 12th Street
Ogden, Utah 84404
(801) 778-6600
Fax (801) 778-6667

August 6, 2014

Rick Everson
Watts Enterprises
5200 South Highland Drive, Ste 101
Salt Lake City, Utah 84117

RE: Serve Notice

Upon completion, the Powder Mountain Development area will potentially consist of 2800 residential units and commercial properties. The project spans two counties, Weber and Cache. Weber County currently has an agreement with Cache County to provide law enforcement services to the entire area as Cache County has limited access to the area. Currently the Weber County Sheriff's Office has one deputy assigned to the area to handle law enforcement.

With current staffing levels, the Weber County Sheriff's Office would not be able to adequately serve a development of more than a few hundred units. It will be imperative that we work with both the developer and county commissioners, both Weber and Cache, to increase deputy numbers at a rate that is the equivalent to the rate of development.

If you have further questions, please feel free to contact me.

Sincerely,

Sheriff Terry Thompson
Weber County

The Powder Mountain project team met with representatives from the Weber County Sheriff's Office, the Weber Fire District and Emergency Medical Technicians throughout the Master Plan development process including during the approvals for the Phase 1 PRUD process and approval. During these meetings, the full Master Plan concept for Powder Mountain was discussed, as well as potential emergency services facilities and personnel that would be required to support the Project at build out. The Fire Marshal and Sheriff indicated they would need a facility on-site, preferably in a central location to aid in easy access to the entire Resort. The possibility of shared facilities was discussed and a preferred solution by all parties. At this point, it is envisioned that the facility would need to include a sheriff office, one engine, ambulance and brush truck. The Powder Mountain team is committed to the health, safety and welfare of visitors and residents of the Project and will work with the emergency services providers to ensure adequate facilities are on-site in the appropriate size and location. Construction of said facilities will be phased as appropriate depending on development.

Included with this application are feasibility letters submitted by the Fire Marshal and Sheriff.

Water and Wastewa

Exhibit B
Proposed amended master plan

June 12, 2013

Weber County Planning Division
Attn: Commissioner Zogmaister
2380 Washington Blvd, Suite 240
Ogden, UT 84401

Subject: **Feasibility of Using Groundwater to Supply Proposed Development**
Proposed Expansion of Powder Mountain Resort, Weber County, Utah
for Summit Mountain Holding Group

Dear Commissioner

This letter presents my opinion of the feasibility of using groundwater to supply the proposed expansion of the Powder Mountain Resort (Powder Mountain) in Weber County, Utah for Summit Mountain Holding Group (the Summit Group).

I understand the following about available water rights and estimated water demand of the existing and proposed new development at Powder Mountain:

- The Summit Group leases 1,400 acre-feet (ac-ft) of water on an annual basis from Weber Basin Water Conservancy District (Weber Basin) for $276,000 per year.
- Based on the Powder Mountain Water Distribution System Master Plan by NV5, Inc. (NV5, 2013).
  - The existing development at Powder Mountain consists of 123 connections with an estimated annual demand of 55.35 ac-ft and a peak-day demand of approximately 88.50 gallons per minute (gpm).
  - The proposed 154 ERUs of Phase 1 have an annual water demand of 65.25 ac-ft and a peak-day demand of about 81 gpm;
  - The proposed 1,000 ERUs of the assessment area have an annual demand of 252 ac-ft and a peak -day demand of about 314 gpm; and
  - The existing development and proposed 1,000 ERUs of the assessment area have a combined estimated annual water demand of 307.35 ac-ft and peak-day demand of 402.5 gpm.

My opinion of using groundwater to supply the proposed development at Powder Mountain is as follows:

- Potential groundwater recharge on the Weber County side of Powder Mountain is estimated to be about 12,400 ac-ft per year (King, 2004), which is more than adequate to supply the 1,000 ERUs of the assessment area.
- Lefty Spring (see Figure 2), which is currently undeveloped, but could be developed under E4715 (35-1195), has a minimum flow of at least 100 gpm. In addition, Loughlin Water Associates, LLC (Loughlin Water) is inventorying and measuring the flow of several other undeveloped springs at Powder Mountain.
- The Summit Group has elected to supply Phase 1 with wells and is currently drilling and testing exploration wells.
- The DDW requires that a new well (or wells) be tested at 1.5 times the peak-day demand of 81 gpm (about 122 gpm) for a minimum of 24 hours to approve the 154 ERUs of Phase 1.
- The Summit Group has tested an initial exploration well at 79 gpm and plans to permit and construct exploration and production wells as they are needed for future phases of development.
- Based on my review of the local hydrogeology, I believe that the 81 gpm required for Phase 1, the 314 gpm required for all 1,000 ERUs, and the combined demand of 402.5 gpm for the existing development and the 1,000 new ERUs can be developed from wells and springs at Powder Mountain.

Details and supporting information for my opinion are provided in the discussions that follow.

WATER RIGHTS

The primary water right for Powder Mountain, and its anticipated expansion, is a contract with Weber Basin to divert up to 1,400 ac-ft on an annual basis (the Weber Basin contract). The Summit Group pays Weber Basin $276,000 per year for this perpetual lease of water regardless of whether any water is called for or actually used.

On November 3, 2006, the Utah Division of Water Rights (DWRi), also known as "*the Office of the State Engineer*" or "*the State Engineer*," approved exchange application E4715 (35-11995) which allows up to 400 ac-ft of the 1,400 ac-ft, available under the Weber Basin contract, to be diverted from wells and springs at Powder Mountain (the exchange application). The exchange application includes three developed springs (Pizzel Springs #1, #2, and #3) and one undeveloped spring (Lefty Spring) and one existing well (Cobabe Well) and up to 14 new wells. Figure 1 shows the location of Powder Mountain and Figure 2 shows the locations of the existing and proposed springs and wells at Powder Mountain.

Exchange application E4715 (35-11995) allows water to be used to supply Powder Mountain and related development served by Powder Mountain Water & Sewer Improvement District (PMWSID). A new exchange application will need to be filed and approved by the DWRi to (1) allow the remaining 1,000 ac-ft available under the Weber Basin contract to be diverted and used at Powder Mountain and/or (2) add additional springs or wells at Powder Mountain.

WATER DEMAND

According to NV5, Inc. (NV5, 2013):

- Phase 1 of the proposed expansion of Powder Mountain consists of 154 ERUs with an average annual demand of 65.25 ac-ft and the peak-day demand of about 81 gpm. Phase 1 combined with the existing connections will have an average annual demand of 120.6 ac-ft and peak-day demand of 169.5 gpm.
- The 1,000 ERUs proposed for the assessment area have an average annual demand of 252 ac-ft and peak-day demand of 314 gpm. All 1,000 ERUs combined with the existing connections will have an average annual demand of 307.35 ac-ft and peak-day demand of 402.5 gpm.

The 400 ac-feet of exchange application E4715 (35-11995) is more than adequate to supply the 1,000 ERUs of the assessment area of Powder Mountain

GROUNDWATER RECHARGE

King (2004) subdivided the Powder Mountain area into eight surface water sub-basins. Most of the existing and proposed wells and springs of exchange application E4715 (35-11995) are located within or near the edge of the Wolf Creek drainage. Proposed wells 7 and 8 are in the Middle Fork of the Ogden River drainage and Proposed Well 14 is in the Geertsen Canyon drainage. King (2004) estimated that the total groundwater recharge from precipitation in these three sub-basins, all of which are on the Weber County side of Powder Mountain, is about 12,400 ac-ft per year. Groundwater recharge includes: (1) 1,660 ac-ft/yr in the Wolf Creek drainage, (2) 9,580 ac-ft/y in the Middle Fork of the Ogden River drainage, and (3) 1,160 ac-ft/yr in the Geertsen Canyon drainage.

The estimated total potential groundwater recharge on the Weber County side of Powder Mountain of 12,400 ac-ft is more than adequate to supply both (1) the 400 ac-ft that can currently be diverted under exchange application E4715 (35-11995) and (2) the additional 1,000 ac-ft of the Weber Basin contract that has not been transferred to Powder Mountain.

TARGET AQUIFERS

Paleozoic-age carbonate rocks (limestone and dolomite) and, to a lesser degree, quartzite rocks, are the primary target aquifers and potential sources of groundwater for Powder Mountain. Potential target aquifers, located on the Weber County side of Powder Mountain, include the Nounan Formation, the Middle Limestone Member of the Bloomington Formation (Middle Limestone Member), the Blacksmith Dolomite, Langston Dolomite, Geertsen Quartzite, and Mutual Formation. These geologic units, where sufficiently fractured and saturated (located below the water table), produce significant quantities of groundwater to wells and springs in neighboring areas of northern Utah.

Because the primary porosity and permeability of the bedrock at Powder Mountain is relatively low, the potential yields of wells will depend, in part, on intercepting zones of secondary porosity and permeability associated with partings along bedding surfaces, fractures, and dissolution features. Limestone dissolves more readily than dolomite and tends to develop greater solution-enhanced permeability. The Middle Limestone Member is the primary target aquifer because this unit (1) contains a greater thickness of limestone than the other units and (2) is overlain in most areas by the low-permeability Calls Fort Shale.

Principal aquitards (confining layers), which separate the aquifers and create stratigraphic groundwater compartments, include the Calls Fort Shale and Hodges Shale members of the Bloomington Formation and the Ute Formation. Note however, that all three of the low-permeability units have interbeds of limestone and/or dolomite that can yield water to wells and springs.

The geology of the Powder Mountain area is complex. The Paleozoic-age bedrock, including the target aquifers, has been folded, faulted, eroded, covered with younger geologic layers, and deeply buried. Based on my review of the local and regional hydrogeology, I believe that the target aquifers, where sufficiently fractured and saturated are capable of supplying the average annual and peak-day demand of the 154 ERUs of Phase 1 and the 1,000 ERUs of the assessment area.

EXISTING DRINKING WATER SOURCES

PMWSID currently uses Pizzel Springs #1, #2, and #3 to supply the existing drinking water demand of Powder Mountain. According to PMWSID staff, the combined wintertime low flow of these three springs is about 40 gpm. These three springs discharge from the base of the Langston Dolomite, near the contact with the upper shale confining units of the Ute Formation.

The Cobabe Well was reportedly airlift tested at 100 gpm, has an unmeasured artesian flow, and is currently equipped with a pump capable of producing about 22 gpm. This well is not currently approved by the Utah Division of Drinking Water (DDW) and is not used by the PMWSID as a source of drinking water. The Cobabe Well produces groundwater from the Ute Formation.

GROUNDWATER EXPLORATION AND DEVELOPMENT

Summit Group is currently drilling exploration wells to identify the best locations to construct production wells. Two or more production wells will likely be needed to supply the proposed 1,000 ERUs.

Lefty Spring (see Figure 2) has a minimum flow of about 100 gpm. Although Lefty Spring could be developed under exchange application E4715 (35-11995), most of the water for the 1,000 ERUs at Powder Mountain will be supplied by wells. Note however, that there is considerable geologic and hydrologic uncertainty associated with the complex subsurface conditions at Powder Mountain. Bedrock is highly deformed and is covered with soils and unconsolidated and semi-consolidated deposits over much of the area. Well yield is dependent on stratigraphic and structural conditions, which can only be known after wells are drilled and tested.

During May 2013 the Summit Group drilled their first exploration at proposed well location #8 shown on Figure 2. A 24-hour airlift test of this exploration well yielded 79 gpm. Field measurements of electrical conductivity indicate that the total dissolved solids (TDS) concentrations is acceptable; however, analytical results will not be available until mid-June 2013. The DDW has approved a production well at this location.

The Summit Group has started a second exploration well at the location shown on Figure 2. If yield and water quality are satisfactory, a production well will be permitted with DDW and DWRi and drilled at this location during the summer of 2013. The Summit Group plans to permit and drill additional exploration and production wells, as needed, to supply the planned expansion of Powder Mountain

William D. Loughlin, P.G.
Manager, Principal Hydrogeologist

LICENSED PROFESSIONAL GEOLOGIST WILLIAM D. LOUGHLIN 5205683-2250 6-12-2013 STATE OF UTAH

Figure 1 – Location Map
Figure 2 – Vicinity Map

Cc: Mr. Russ Watts, P.E. Watts Enterprises, Inc.
Mr. Rick Everson, P.E. – Watts Enterprises, Inc.

POWDER MOUNTAIN WATER RIGHTS AND WATER DEVELOPMENT STATUS

Summit Mountain Holding Group (SMHG) currently owns 1,400 acre feet of Weber Basin water rights on the top of Powder Mountain in seven different state approved diversion points. The 1,400 acre feet of water rights is more than enough to supply water for the approved 2,800 units per the Development Agreement. (See attached Bill Loughlin's Engineering letter)

It is the obligation and right of SMHG to develop, in conjunction with the Powder Mountain Sewer and Water District and the State Division of Drinking Water, each well site to extract and store the designated water requirements for the development of each phase of the project as designated by the State of Utah.

POWDER MOUNTAIN WASTEWATER PLAN

SMHG, in conjunction with the Powder Mountain Sewer and Water District, and the Wolf Creek Sewer and Water District, are in the engineering and planning stages to combine their wastewater treatment facilities to provide service for the future growth of the Powder Mountain Development.

SMHG is presently in the middle of negotiations, engineering, planning, and strategy to combine parts of the main trunk lines to assure future growth and wastewater services for the Powder Mountain Development.

Be

Exhibit B
Proposed amended master plan

Redevelopment Agency of Weber County
Proposed Community Development Project Area - Powder Mountain

FINANCIAL SUMMARY

Proposed Development	20 Year Total	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018	Year 6 2019	Year 7 2020	Year 8 2021	Year 9 2022	Year 10 2023	Year 11 2024	Year 12 2025	Year 13 2026	Year 14 2027	Year 15 2028	Year 16 2029	Year 17 2030	Year 18 2031	Year 19 2032	Year 20 2033
Land Sales Per Year		$43,560,000	$10,451,000	$11,142,000	$12,608,000	$13,877,000	$30,026,000	$40,841,000	$41,543,000	$41,853,000	$75,000,000	$46,119,000	$36,000,000	$0	$0	$0	$0	$0	$0	$0	$0
Land Sales		43,560,000	10,451,000	11,142,000	12,608,000	13,877,000	30,026,000	40,841,000	41,543,000	41,853,000	75,000,000	46,119,000	36,000,000	-	-	-	-	-	-	-	-
Total Assessed Value Per Year (discounted and rounded edp version)		34,400,000	72,200,000	160,100,000	216,800,000	328,600,000	364,800,000	451,100,000	497,900,000	554,600,000	640,800,000	679,100,000	711,500,000	747,600,000	831,000,000	840,000,000	840,000,000	840,000,000	843,000,000	845,000,000	848,000,000
Cummulative Investment Totals: (SMHG & BR - discounted)		43,560,000	80,675,000	178,321,000	214,373,920	318,119,400	358,683,920	451,596,680	514,711,240	565,638,280	675,985,440	725,875,920	769,466,920	809,206,920	924,473,920	924,473,920	924,473,920	924,473,920	924,473,920	991,973,920	991,973,920
Proposed Resort/Residential Development (investment per year)	$991,973,920	43,560,000	$37,115,000	$97,646,000	$36,052,920	$103,745,480	$40,564,520	$92,912,760	$63,114,560	$50,927,040	$110,347,160	$49,890,480	$43,591,000	$39,740,000	$115,267,000	$0	$0	$0	$0	$67,500,000	$0

In 2013 the Summit Mountain Holding Group, in conjunction with Weber County, hired Bonneville Research to conduct an in-depth study of the costs and phasing of the Powder Mountain improvements and the potential tax benefit yield to the citizens of Weber County. (See attached Bonneville Research Benefit Analysis - Exhibit 4) This study was based on an initial assumption of 1,000 residential units and 290,000 SF of hotel, commercial, retail and restaurant square footage. These numbers are roughly equivalent though slightly lower than the proposed phase 1 development numbers and were used to provide a more conservative study in an effort to not overstate the potential project positive impacts. The total proposed development of 2,800 units (which includes hotel units) assumes a proportionate increased positive yield for Weber County but may vary pending actual product types, infrastructure requirements, etc. as the project develops. (See attached Economic Impact Memorandum from Bonneville Research, Exhibit 4.1)

Study Numbers
1,000 Residential Units
190,000 SF Commercial Hotels
@ 360 SF/room = 527 units
100,000 SF Retail/Restaurants

Proposed Phase 1 Numbers
1,204 Residential Units
818 Hotel Units
100,000 SF Retail/Restaurants

Study Highlights

- The projected 20 year cumulative resort investment totals an estimated 990 million dollars.
- The projected total infrastructure investment over 20 years is an estimated 105 million dollars.
- The projected annual tax revenue to Weber County at the 20 year level is estimated between 40-50 million dollars.

Exhibit C
Proposed Development
Agreement Text Changes

SECOND AMENDMENT
TO
WEBER COUNTY
ZONING DEVELOPMENT AGREEMENT

THIS SECOND AMENDMENT TO WEBER COUNTY ZONING DEVELOPMENT AGREEMENT (this "**Amendment**") is made to be effective as of date this Amendment is approved by the Weber County Commission and is made by and between Summit Mountain Holding Group, L.L.C., a Utah limited liability company, ("**Developer**") and Weber County, a body politic in the State of Utah ("**County**") with reference to the following:

RECITALS:

A. Developer and County are parties to that certain Weber county Zoning Development Agreement (the "**ZDA**") dated as of January 13, 2015. A true and correct copy of the ZDA is attached and incorporated into this Amendment as Exhibit A. Any undefined capitalized terms used in this Amendment shall have the same meanings ascribed to such terms in the ZDA.

B. Developer's predecessor-in-interest and the County entered into that certain Weber County Zoning and Development Agreement by and between the County and Western America Holding, LLC a Utah limited liability company recorded in the Office of the Recorder for the County as Entry # 2607988 on November 29, 2012 (the "**Original ZDA**"). The Original ZDA was amended by that certain First Amendment to the Powder Mountain Zoning and Development Agreement made by and between Developer and the County dated as of September 10, 2013 (the "**First Amendment to the Original ZDA**") pursuant to which Developer assumed obligations under the Original ZDA.

C. The ZDA and the Original ZDA, as amended, were further amended by that certain First Amendment to ZDA recorded as of July 12, 2019. A true and correct copy of the First Amendment to ZDA is also attached and incorporated into this Amendment as Exhibit A. The Original ZDA and the ZDA as previously amended as described above are referred to in this Amendment as the Existing ZDA.

D. Developer and the County desire to amend the Existing ZDA in accordance with Section 3 to: (i) approve a revised Overall Land Use Plan and revised Conceptual Development Plans for the Development Areas A, B, C, D, E, and F, more particularly described in Exhibit "B" which is attached and incorporated into this Amendment by this reference.

NOW, THEREFORE, in consideration of the above recitals, the mutual covenants set forth below, and other good and valuable consideration, the receipt and adequacy of which are acknowledged, Developer and the County agree as follows:

AGREEMENT:

1. Recitals. The above recitals are an integral part of the agreement and understanding of Developer and County and are incorporated into this Amendment by this reference.

2. Amendment to Exhibit B. Exhibit B of the Existing ZDA shall be deleted in its entirety and amended and restated with Exhibit B attached and incorporated into this Amendment.

Exhibit C
Proposed Development
Agreement Text Changes

3. Concept Development Plan. Section 3.2of the Existing ZDA shall be deleted in its entirety and replaced with the following:

"Weber County shall retain the right to approve or deny more specific/detailed Concept Development Plans for Areas A through F. The concept development plans shall be approved prior to or in conjunction with the first application for site plan or subdivision approval within each development area.

Notwithstanding the foregoing, the Developer and County acknowledge that the Land Use Plan as provided for in Exhibit B to the Agreement (i) is conceptual in nature and may be further refined by the parties, and (ii) that specifics regarding locations of roads, building area and product types (e.g. multi-family, mixed-use, single family, corporate retreats, etc.) may be moved within the areas generally depicted as A through F. Unit density for each Area (A through F) is fixed and may not be transferred between Areas. Concept Development Plans for each Area are expected to evolve and be presented in phases in the context of a more detailed master plan for each Area. County approvals for these Concept Development Plans will technically be handled at the Staff level and will not require amendment of the ZDA or Land Use Plan."

4. Effect of Second Amendment. Except as expressly modified by this Amendment, all the terms and conditions of the ZDA shall remain in full force and effect. In the event of a conflict between the terms of the ZDA and this Amendment, this Amendment shall control.

5. Counterparts. This Amendment may be executed in multiple counterparts, each of which shall constitute an original and all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties having been duly authorized, have executed this Amendment to be effective as of the date this Amendment is approved by the Weber County Commission.

Approved by the undersigned parties this _____ day of _____ 2022.

DEVELOPER:

SUMMIT MOUNTAIN HOLDING GROUP, L.L.C., a Utah limited liability company

By Summit Revolution LLC, its sole member

By: _____
Anne C. Winston
Authorized Signatory

Exhibit C
Proposed Development
Agreement Text Changes

COUNTY:

WEBER COUNTY CORPORATION

By: _____
Name:
Title:

ATTEST:

By: _____
Name:
Title: Weber County Clerk/Auditor

Exhibit C
Proposed Development
Agreement Text Changes

EXHIBIT A

Copy of ZDA and First Amendment

See attached.

Exhibit C
Proposed Development
Agreement Text Changes

EXHIBIT B

Amended and Restated Master Plan

See attached.

Exhibit C
Proposed Development
Agreement Text Changes